

MEASURING PERCEPTIONS OF HEALTH CARE AS A COMMODITY OR AS
A PUBLIC RIGHT AMONG COMMUNITY PHARMACISTS IN
SASKATCHEWAN

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By
Swathi Sira Krishnaprasad

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ABSTRACT

The Canadian health care system is primarily public funded. With constant rise in health care costs, there is debate on how to best fund Canadian health care.

Public, private and mixed funding options are being discussed. The funding options people support will depend on how they view the health care system. Is health care a commodity or a public right? Pharmacists interact with patients daily and are involved in the delivery of health services. Their views on whether health care should be a public right or a commodity can add meaningful input to the debate.

The primary objective of this study was to develop a scale to measure pharmacists' perceptions of health care as a commodity or a public right. In turn, this scale was used to see if a relationship exists between pharmacists' orientation to health care (commodity vs. public right) and their support for different health care funding options.

A mail-in survey of community pharmacists in Saskatchewan was conducted based on the Dillman approach. The questionnaire consisted primarily of six-point Likert scale questions. Data analysis was performed using non-parametric tests such as Mann-Whitney U and Kruskal Wallis tests. One-way ANOVA was used for parametric data and post-hoc analysis was performed using Bonferroni test. Correlation of the scales was tested using Spearman's and Pearson's correlation coefficients. The response rate achieved was 64.2%.

The study results indicate that pharmacists are not willing to provide cognitive services free of charge. However, they are willing to continue providing OTC drug counseling free of charge. They will not restrict provision of cognitive services only to patients' able pay. They prefer being reimbursed through other sources. They are unwilling to make time and income adjustments to improve patient health outcomes. They do not want to link the financial rewards they receive to the amount of benefit the patient receives.

Pharmacists favour the current system of funding health care in Canada but would prefer more choice in the delivery and funding methods. The results do not indicate any relationship between pharmacists orientation to health care (commodity vs. public right) and their level of support for different health care funding strategies.

The study conclusions suggest that pharmacists' value and appreciate the direct impact of their work on patients. However they consider themselves to be professionals first and expect to be compensated financially for their services. Their willingness to spend time and effort towards provision of services as a public right seems to be predicated to a certain extent by the financial rewards they receive.

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CHAPTER 1

INTRODUCTION

1.1 General Background

Health care involves the delivery of medical services by a number of practitioners including physicians, nurses and pharmacists. In Canada, the health care system includes a variety of access points such as hospitals, primary care centers, community clinics, private clinics and pharmacies [1]. The health care system in which these providers deliver health services can be funded in various ways - a predominantly privately funded system, a predominantly public/government funded system, or a combination of private and public funded systems [2-7].

The financial resources needed to support the Canadian health care system are derived from a combination of private and public funding. Public funding refers to financial resources provided by or through governments while private funding is provided directly by individuals or through prepaid insurance plans funded by private groups or individuals. Hospital and physician services are almost exclusively covered through public funds while other services rely to a greater degree on private funding- most notably prescription and non-prescription medication [5].

Approximately 69.6 percent of health spending in Canada in 2005 was funded by public sources, while private funding accounted for about 30.4 percent [6, 8]. The level of public funding in Canada was slightly below the average of 72 percent in the Organization for Economic Cooperation and Development Countries (OECD) [9]. In several Nordic countries (Denmark, Norway and Sweden), the UK and Japan, a far greater share of funding (> 80%) is public [9]. In developed countries such as Canada and the Scandinavian countries, health care is financed mostly from public sources. Among industrialized countries, USA is the exception; public health spending is about 44 percent with the remaining privately funded [9]. Less wealthy and less developed countries such as South Africa and India rely to a much greater extent on private funding (>75%) [10].

A similar continuum can be seen with regard to perceiving or treating health care as either a commodity or as a public right. At one extreme, health care as a commodity suggests a wholly commercial relationship with services exchanged for a corresponding level of remuneration [11, 12, 13]. At the other extreme, health care is viewed as a right of citizenship with providers seeking to maximize the benefits obtained by patients and society, without the expectation of a corresponding reward to the providers themselves [14].

1.2 Statement of Problem

The Canadian health care system has undergone various reforms in response to changes within medicine and society. Since the introduction of Medicare, however, the basic premise has remained the same - universal

coverage for medically necessary health care services provided on the basis of need, rather than the ability to pay [5, 6].

Despite being popular among Canadians, there are concerns with respect to the sustainability and economic feasibility of the current system. The goal of the ongoing debate is to develop a health care system that provides universal service based on need while being economically sustainable at the same time [8, 14, 15].

The attitudes and perceptions of health care service providers, patients and society as a whole on how they view health care services, as a commodity or as a public right, is critical to the debate.

By measuring the perceptions of pharmacists towards health care services as a commodity or a public right we may also gain an understanding of how they view their role as professionals in delivering these services.

1.3 Purpose of Study

The primary purpose of the study was to develop scales that would measure pharmacists' attitudes towards health care as a commodity or a public right. Individual scales focused on: 1) attitudes towards charging a fee for new and existing cognitive pharmacy services; 2) willingness to forego time and income in exchange for improved patient outcomes; and 3) reward expectations for improved patient outcomes. In turn, these scales were used to provide a preliminary assessment of the strength of the relationship between pharmacists' perceptions of health care as a commodity or public right and their support for the different options of funding Canadian health care.

1.4 Hypotheses of Study

Null Hypothesis: ***H₀***: Pharmacists' orientation to health care (commodity versus public right) is not related to the level of support for public funding of the health care system.

Alternative Hypothesis: ***H_a***: Pharmacists' orientation to health care (commodity versus public right) is related to the level of support for public funding of the health care system.

1.5 Research Questions

1. To what extent do community pharmacists view health care services as a commodity or as a public right?
 - a. What are community pharmacists expectations regarding pricing and payment for cognitive services?
 - b. To what extent are community pharmacists willing to adjust their time and income to improve patient outcomes?
 - c. To what extent do community pharmacists seek monetary and non-monetary rewards for their services?
2. What are the attitudes of community pharmacists towards the funding and organization of the health care system?
 - a. To what extent do community pharmacists support a publicly funded health care system?
 - b. To what extent do community pharmacists support enhancing a public-funded health care system?
 - c. To what extent do community pharmacists support greater role for private competition, deductibles, co-payments and other market-based strategies?
3. What is the relationship between support for different health reform strategies and the community pharmacists' perception of health care as either a commodity or a public right?

1.6 Significance of Study

Health care reform is a significant and ongoing challenge for Canadian society. Community pharmacists play an important role as health care service providers and can be influential participants in the debate on how to best fund the health care system.

The baseline knowledge gained from community pharmacists through this study may be used to help inform those who frame and implement health policies by relaying the opinions of pharmacists with regard to their orientation to health care (commodity versus public right) and their support for the current and alternative funding models.

1.7 Relevant Terms and Definitions

COGNITIVE SERVICE: Services provided by a pharmacist to, or for, a patient or health care professional that go beyond regular professional activities such as dispensing and routine medication counselling [19].

COMMODITY: A good or service that is traded or exchanged between distinct parties and whose relationship is created by the exchange [11].

PUBLIC RIGHT: With respect to health care it is defined as a right to access health care service based upon need as opposed to ability to pay [6, 11].

CHAPTER 2

LITERATURE REVIEW

In reviewing the orientation of community pharmacists to health care as a commodity or public right and their support for the different health care funding options, the relevant literature is presented in the following manner. First, the historical roots of the development of health care in Canada and how societal values have played a role in shaping health care policy and organization is presented. Second, a comparison and contrast of the features of the Canadian system with those of substantially more private (USA) or more public funded (UK) health care systems is presented. Third, the relevance of the concepts of commodity and public right to the funding debate is examined. Fourth, the evolution of the important role currently played by pharmacists as health care providers is presented. Finally, a summary of all the relevant issues is presented.

2.1 Evolution of Canadian Health Care

The evolution of the Canadian health care system has been categorized by others into three distinct periods: Pre-Confederation (or early Canada),

Post-Confederation and Post-Second World War [6, 20]. A fourth period is now emerging that might be classified as the “Era of Perpetual Reform.”

2.1.1 Pre-Confederation

Beginning in the early part of the 17th century, explorers and settlers who came to North America were interested in creating a prosperous life [7]. However, they also brought with them infectious diseases such as small pox, typhus, tuberculosis and cholera. Due to poor sanitation, malnutrition, insufficient clothing and shelter for the harsh winter, these infections were widespread and often flourished as mass epidemics [7, 20].

Due to a general lack of formal health care services, these early settlers were required to be self-reliant and could not look to government for help. They largely depended on their families, their local communities and the church [21]. The public health boards, public health laws and quarantine practices that did exist were primarily concerned with controlling the spread of infections [20] and were often neglected or became inactive once an outbreak subsided. Also, due to the limited knowledge of the causes of diseases, it was difficult to effectively control or reduce morbidity and mortality rates.

In 1867, the British North America Act brought together the widely dispersed and independent regions under one nation: Canada. It also set out responsibilities for the federal and provincial governments. The federal government was assigned responsibility for taxation, criminal law, census and statistics, quarantine and marine hospitals. Almost by default, responsibility for maintaining and managing hospitals, asylums, charitable organizations and

other matters of a local or private nature fell to the provinces [22]. The actual delivery of health care services was through private for-profit or not-for-profit charitable groups. The government played a minimal role in the delivery of health care services.

2.1.2 Post-Confederation

Between 1867 and the end of the Second World War, there were many economic and scientific changes that influenced the formation of modern health care patterns [21]. Industrialization caused people to migrate from the country to the cities resulting in overcrowding along with poverty and unsanitary living conditions. The cities became breeding grounds for epidemics and communicable diseases and, as before Confederation, continued to cause the majority of morbidity and mortality rates.

Slowly, with improved living standards and the influence of the reform movements taking shape in Europe, the Canadian government began to realize the need for more formal delivery of health services. This along with a greater understanding of the relationship between wage levels, employment conditions and social distress gave an impetus to better organize and deliver health care services.

Knowledge about personal health care also began to increase [20]. Prior to Confederation, home remedies were mostly used to treat the sick, and the women in the families often cared for the ill. Most women were not formally trained, but were often skilled in practices such as mid-wifery and simple home remedies. However, as more people migrated to the cities, they became more

self-reliant and their dependency towards the community to address health problems declined.

At the same time, advancements in medical science and a shift from public health and prevention of diseases to treatment and diagnosis brought new health care practices into the system [1]. Canadians started to accept the benefit of hospitalization for serious illness [23]. The concept of health insurance for medical services also appealed to many people [1].

Before insurance programs were introduced, people paid for most of the physician and hospital services they used. Under this type of system, wealthier citizens were able to access these services, while poorer citizens often relied on charitable organizations. Through private health insurance people could also pay incrementally in advance, allowing more people to gain access to health care services.

The Great Depression of the 1930's was a great catalyst for change [7, 20]. Increases in unemployment and economic hardship were also reflected in higher disease and illness rates. Often private insurance plans, could not provide financial security in case of serious illness, or was beyond the financial ability of most people. In addition, the charitable organizations could not serve all those requiring care. Radicalized by the need for affordable health care, people turned towards government for financial support and improved access to medical care.

2.1.3 Post-Second World War

With increased malnutrition and poverty during the Great Depression and increasing health care costs but limited insurance coverage, governments began to support the concept of a health insurance program, based on need rather than on the ability to pay [7].

In 1947, the Saskatchewan government launched the first universal hospital insurance program in North America [24]. By the mid-1950's, there was increased public pressure for the implementation of a nation-wide hospital insurance program [6, 25]. There was also increasing pressure from provincial governments for the federal government to share the cost of hospital care. The Hospital Insurance and Diagnostic Services Act (HIDSA) established in 1957 committed the federal government to providing grants to the provincial governments for hospital care to all residents free-of-charge [6, 7, 22].

Saskatchewan also introduced the concept of public payment for medical (physician) services. In 1959, Premier Douglas introduced to the people of Saskatchewan the five principles on which any scheme included in the health care plan would be established. The first principle was *pre-payment*. The second principle was *universal coverage* to cover the good risks as well as the bad, thus spreading the cost over the entire population. The third principle was *high quality service* through better distribution of medical personnel between the urban and rural areas of the province, group practice, postgraduate work and refresher courses, medical research, the development of facilities and techniques, and the integration of curative and preventive services. The fourth principle was *consumer sponsorship* through administration by a public body responsible to

the legislature and through it to the entire population. The fifth principle was *acceptability* both to those providing the service and those receiving it [25]. This represented the first contribution of what would later evolve into the five principles of Medicare.

Attempts to establish public payment for physician services resulted in turmoil between the medical profession and the government with regard to payment for doctor bills and the freedom of the profession to practice as it saw fit [25, 26]. This resulted in a doctors' strike in 1962 that ended in a compromise between the profession and the government of Saskatchewan. The public plan (Medicare) would be administered by the government, but doctors retained authority over the provision of anything deemed to be medically necessary (comprehensiveness) to any resident of Saskatchewan (universality) as long as these services were provided in a doctor's office or hospital [26]. As a result of this compromise, two of the original principles - *pre-payment* and *consumer sponsorship* - were lost in favour of fee-for-service payments through the government insurance plans and the doctors' orders would prevail with regard to provision of services.

A year after the doctors' strike, the Federal government established the Royal Commission on Health Services headed by Chief Justice Emmett Hall to study the issue of funding health care system in Canada. The Hall Commission recommended that the federal government assist the provinces by introducing and operating a comprehensive and universal provincial program of health care [7]. This led to the introduction of the Medical Care Act in 1966 and its implementation in 1968.

The Medicare Act required the federal government to share the costs of the provincial medical insurance plans on a dollar-per-dollar basis [20]. Thus, the single payer system, commonly known as Medicare to Canadians came to be operational, bound together by common principles overseen by the Federal government.

The period of 1972 to 1984 saw the consolidation of the public-funded health care system which covered all physician services and promised comprehensive, universal health care coverage. The passage of acts such as the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act (EPF) changed the federal cost sharing for hospital and medical insurance from a conditional grant to a modified block grant system. This provided the provinces more flexibility in the use of federal transfer payments [27, 28].

In 1984, the Canada Health Act (CHA) was passed. This Act consolidated the Hospital Insurance and Diagnostic Services and Medical Care Acts and defined clearly the federal payment criteria and conditions. It reaffirmed public funding for selected health services based on five principles [1]. The health care plan had to be *universally available* to all the residents of the province who were eligible for insurance and it had to cover the entire population [6]. The plan had to be *comprehensive* and cover all hospital and physician services without any limits. It had to be *accessible* to all the eligible residents of the province based on need and not on the ability to pay. The insurance plan had to be *publicly administered* on a non-profit basis by an agency or organization which was accountable to the provincial government for all its financial transactions. And

finally, the plan had to be *portable* between provinces which meant that it had to cover for temporary absence of the eligible resident and also for a period of 90 days or until receiving the new provincial coverage if moving to another province.

2.1.4 Era of Perpetual Reform

Today, the Canadian health care system is comprised of a set of provincial and territorial plans which make up the national insurance program. However, there are differences in the provincial/territorial health care plans across the country. In addition to coverage for hospital and physician services, the provincial/territorial plans may also include long term care, home care, prescription drug plans, eye and dental care. The administration of the services is based on the nature of their respective provincial health care plan and every province/territory is free to determine its share of coverage [20].

Due in part to an economic recession that decreased tax revenues and increased federal and provincial deficits, the federal transfer payments to the provinces were substantially reduced during the late 80's and early 90's [28]. Also with an aging population and advancement in medical technology, the cost pressure of controlling the government's health care budget became more difficult. During this period, most provinces and territories launched an extensive re-examination of their health care systems to improve efficiency and control costs [27, 29].

Today despite renewed Federal funding, a growing financial burden on the provincial health care budget is continuing to direct health care towards

more changes in the administration and delivery of medical services. Major reform initiatives were recommended periodically to the government, such as the National Forum on Health [30], Fyke [31], Kirby [32] and Romanow [6] reports.

The National Forum on Health was established in 1994 to inform the Canadian public and to advise the federal government on innovative ways to improve the health system. The report confirmed and recognized the values Canadians place on the health care system and the need for reform. It encouraged extension of public funds beyond hospital and doctor offices in order to develop a long-term sustainable system. The report also mentioned that the principles of the Canada Health Act (CHA) are flexible enough to accommodate organizational reforms [30].

The Fyke Commission was set up in 2000 to study the health care system in the province of Saskatchewan. The aim was to identify key challenges facing the people of Saskatchewan in reforming and improving Medicare and to recommend a health care model that would ensure the long term sustainability of a publicly funded system. The report did not make any explicit recommendations on expanding coverage beyond what is covered by the Saskatchewan health insurance plan. However, it recommended establishing a Quality Council whose role would be to suggest what new services and treatments should be covered due to the emergence of new technologies. It also recommended the following - the development of an integrated system for delivery of health care; the development and/or continuation of public health, health promotion and disease and injury prevention strategies [31].

The Romanow Commission was established in 2001 to engage Canadians in a national dialogue on the future health care and make recommendations to preserve the long-term sustainability of Canada's public health care system. The report highlights include-increase in federal funding by 2005/2006 to achieve the goal of adequate, stable and predictable funding; make the system more comprehensive by updating the Canada Health Act (CHA) to include home care services; improve timely access to quality health care by improving waitlist management, increase the supply of health care providers and advanced diagnostic services; and encourage a national electronic health record system which protects the security and privacy of personal health information [6].

In 2001/2002, the Standing Senate Committee on Social Affairs, Science and Technology chaired by Senator Kirby studied the state of the Canadian health care system and the role of the federal government in this system. The Kirby report recommended that the federal government ensure strong leadership and provide additional funding to sustain, better coordinate and integrate the public health infrastructure in Canada as well as relevant health promotion efforts. And in order to undertake this reform an amount of \$5 billion in additional federal funding was recommended [32].

Although both the Kirby and Romanow reports agreed on the need to expand the scope of publicly funded services, they differed on how to best fund this expansion. Kirby proposed that a new federal health insurance premium be used to raise \$5 billion for federal investment in health care which can be considered a tax increase. Romanow proposed that the expanded public

services come under the umbrella of the Canada Health Act (CHA) in order to ensure compliance with its five principles [6, 32, 33].

Kirby recommended the continued involvement of private insurance programs with co-payment for household prescription drugs. However, Romanow proposed expansion of publicly funded services into areas such as prescription drugs and home care which are currently privately funded [6, 32, 33].

They also differed on the best way to deliver health care services. Kirby proposed letting the competitive market decide who is best placed to deliver specific services, which could mean both public and private involvement. For example, Kirby proposed moving from the global funding of hospitals to a service-based funding, where hospitals would be paid based on the services they perform. Romanow did not want any further expansion of private sector in the delivery of health services. He states “Canadians view health care as a moral enterprise not a business venture” [6, 32, 33].

All the above recommendations relate to the values and expectations of the Canadians and emphasized the role of health care practitioners as important stakeholders in the reform initiatives [6, 32-36].

The implementation of the recommendations would require co-operation and participation of all health care providers including doctors, nurses and pharmacists. By working together as a health care team they could better understand and respect each other's roles and responsibilities as individual service providers.

It is therefore important for stakeholders of the health care system such as physicians, pharmacists and policy makers to study the feasibility of the different options in order to support existing and alternative funding arrangements.

Some of the different options being studied are similar to the USA and the UK health care models. The next section will compare the features of the Canadian health care system with that of the USA and the UK, followed by a review of options and reasons for seeking a change in the funding arrangement of the Canadian health care system.

2.2 USA System

During the period 1880-1930, formalized health care was established in the USA [37]. This was also the period during which health insurance began as a method of prepaying health care costs. The Great Depression slowed the expansion of medical services, facilities and personnel. As the case in Canada, the public found it hard to pay for medical services which put a heavy financial burden on hospitals and doctors. Baylor University hospital in Texas introduced the first insurance plan in 1929 as a way to guarantee a steady cash flow by spreading the financial risk [37]. This plan was expanded by groups of non-profit hospitals across various cities which gave patients a choice in service providers. This increased patient participation and resulted in higher income for the hospitals. It became a model for the Blue Cross/Blue Shield insurance program. It was also the beginning of commercial insurance where a profit motive was introduced by guaranteeing hospitals a steady flow of income [37].

The Blue Cross/Blue Shield insurance plan used a method of reimbursement called cost-plus which meant that physicians could be reimbursed according to “reasonable and customary” charges while hospitals were reimbursed on a percentage of their costs plus a percentage of their working capital. This model provided an incentive for doctors and hospitals to bill more to increase their income which lead to higher health care costs.

In the 1940’s employers started offering health benefits as a way of providing additional compensation and to attract workers [37]. The Internal Revenue Service (IRS) provided tax incentives to both employers and workers by not taxing the cost of health benefits. There was a rapid growth in the number of workers covered by health insurance when workers unions of large companies, especially steel and automotive manufacturers began to negotiate health insurance coverage for their employees in the late 1950’s [37].

During the decades of the 1940’s and 1950’s, the government encouraged expansion of provider-oriented insurance plans offering First-Dollar coverage [37]. This meant that the insurance would cover routine health care costs such as annual physical exams while providing relatively little coverage for catastrophic illnesses and expensive treatments.

The growth of employer-provided health insurance increased the medical needs of the unemployed, poor and elderly population who did not have any insurance. This led to the growth of Medicare in 1965 [37, 38].

Medicare is a public insurance program provided to people over 65 years of age and those with disabilities. It does not cover a larger proportion of outpatient prescription drugs and many preventive services such as routine

physical exams. The beneficiaries share the costs through annual deductibles and co-payments and it involves a certain risk for patients with long hospital stays. As a result, most people covered by Medicare also have supplemental forms of insurance to reduce out-of-pocket costs and fill any gaps in the Medicare program [37, 38, 39].

Medicaid, a health insurance program financed by federal and state funds, provides coverage for the poor, and low-income elderly and disabled people. The federal government matches the state funds at a rate which is determined by the income levels of the state's residents. Since it is administered by the state, coverage, benefits and payments for Medicaid may vary between states. It covers acute care and preventive services, and is the single largest payer for long term care which is not covered by Medicare and most private insurance plans. Federal government employees and members of the military and their families are also covered through public insurance [37, 38].

Due to high inflation rates in the 1970's, worker demands higher wages pushed them into higher tax brackets. Health insurance costs were tax deductible, causing more employers to offer insurance plans and an expanded range of benefits. However, health care costs continued to increase putting pressure on the funding system. This led, in part, to the formation of Health Maintenance Organizations (HMO's) by the USA Congress in 1973 [37].

Managed care plans such as HMO's and PPO's (Preferred Provider Organizations) have detailed contractual or employment relationships with health care providers [38]. Networks of health care providers employed by the HMO's or the PPO's are often salaried physicians and may participate in more

than one health plan [38, 40, 41]. They allow the enrollees to choose from a network of physicians participating in the health plan or choose a primary care physician who would provide primary care and direct referrals to specialists in exchange for a fixed monthly payment from the managed care plan [38, 40].

However, to reduce costs these plans set limits on patient choice of provider and treatment in addition to allowing intervention in the physicians' medical decisions. These restrictions led to a backlash contributing to legislation in the mid-1990's which guaranteed required coverage of particular services, established minimum hospital stays for certain conditions and addressed physicians rights issues [37, 38].

The delivery of health care in the USA is mainly private in nature. Most of the hospitals are community-based for-profit institutions [38]. There are some investor-owned health organizations, as well as hospitals run by the federal government to serve veterans, military personnel and Native Americans [38].

Between 1993 and 2003, the number of hospitals fell by more than 14 percent primarily due to mergers and consolidation [38]. Increasingly, hospitals are complex health care delivery systems providing primary care, wellness, home health, long term care, hospice care and other aspects of health care [40].

A reduction in the length of hospital stays has caused an increase in the provision of post-acute, home health and long term care. Health services are often delivered by home health agencies and skilled nursing facilities; either hospital-based or free standing institutions such as nursing homes [38].

About one-third of the physicians are primary care providers and the remaining are specialists. Physicians participating in managed care or hospital-

based care can be either independent professionals or salaried employees [38]. Salary is independent of the type of services rendered or the number of patients treated while fee-for-service depends on these factors. Independent professionals can be paid by capitation or fee-for-service. Capitation is a form of payment where a physician is paid a fixed amount per patient irrespective of the number and type of services provided. Sometimes special incentives and bonuses are provided to physicians based on referral patterns which lower costs. Rarely such bonuses are provided based on performance measures such as patient satisfaction. Both Medicare and Medicaid programs also provide fixed reimbursement to physicians [38].

In the USA, health care financing and insurance coverage involves multiple payers. Sources of coverage vary depending on population characteristics such as employment, income and age [38].

Almost three-quarters of the US population are covered by private or not-for-profit health insurance [38]. Private insurance is primarily employer-sponsored health insurance. It also includes a small percentage of the population covered by insurance directly purchased on an individual basis. The individually purchased insurance is often inaccessible to persons not working or early retirees who are not yet eligible for Medicare [38, 39]. The insurance plan charges high premiums and deductibles and often does not include coverage for pre-existing medical conditions [42, 43]. In addition to the insurance coverage, there are also out-of-pocket payments in the form of co-payments and deductibles made by individuals for services not covered by the insurance plan. About 16 percent of the population does not have any form of insurance due to

their ineligibility for public insurance, inability or unwillingness to purchase private insurance and/or other barriers to enrollment. In addition, many people are underinsured which puts their health and finances at risk (about 15 percent) [44]. The cost of health care for the uninsured is covered to some extent by the individuals themselves. Public hospitals and community clinics also receive public funding for the provision of care to the uninsured.

To summarize, the USA health care system is largely a privately funded and delivered system. It differs from the Canadian health care system mainly in terms of its provision of health care services based on the individual's ability to pay and less on need and accessibility. However, it is a system responsive to consumer preferences and allows for competition and choice. A wide range of health care insurance programs are available providing access to the latest medical technology and resources. However, a substantial portion of the population is either under-insured or uninsured, limiting their access to basic health care services. It seeks something of instrumental value (primarily profit) in exchange for the quality of the services provided. This reflects in a tangible way the concept of health care as a commodity which is discussed in more detail in the literature review.

2.3 UK System

The UK health care system is constituted primarily as the National Health Service (NHS). The NHS was set up in 1948 as a publicly financed system with the aim of providing health care that was freely accessible, universal and comprehensive [45, 46]. Over the next four decades this goal was largely met

although free access to optical, dental and pharmaceutical care was partially lost. The NHS is funded through taxation and a small portion from national insurance contributions [47]. Physician services, in-patient and out-patient hospital care, mental health care, rehabilitation and a portion of dental and prescription drug coverage are provided by NHS [46].

Budgets for hospitals and health care services were set up on a regional basis based on demographic and other factors administered by district health authorities [45]. General practitioners provided primary care and were self employed. They were paid by a mix of capitation, fee for service and other allowances [45, 46]. Health care spending in the NHS was tightly controlled because budget limits were strictly enforced. However, this led to rationing of resources and a lack of sensitivity to patient needs. This led to long waiting times and lack of patient choice. As there were no incentives, hospitals were less motivated to embrace technological developments or to dispose of redundant assets [45].

In 1988 major reforms were proposed to improve the efficiency of the NHS and to make it more responsive to patient needs. Competition and market forces were added to the system [45, 46]. The health authorities role changed from being organizers and providers of care to being evaluators of health care needs of their areas population. Hospitals became corporate trusts and had to compete with each other for contracts from health authorities. Patients were allowed to choose their general practitioner who was responsible for purchasing hospital services for his/her patients and this allowed for competition among the practitioners who were paid through the contracts [45, 46].

There were some positive results due to these reforms. The separation of the providers (hospitals) from the purchasers (health authorities, general practitioners) led to reduced costs due to competition for contracts. However, there was no overall improvement in efficiency and no reduction in patient waiting lists and waiting times although there were some improvements observed in particular areas. There was a major increase in administrative costs due to the negotiation, monitoring and accounting functions involved in the contracting process [45, 46]. The reforms also led to longer waiting times and poor service for patients of general practitioners who were not a part of the market-based network system [47].

It is argued the introduction of a market-based system did not have a strong impact because the allowance for market competition was contrary to the values and ethics of those in the NHS [45, 46]. Most of the health care professionals preferred to work in the same co-operative fashion as before the introduction of market forces. The general public was also dissatisfied with the lack of improvements to the health care system and rejected the application of market competition.

In 1997 the market based system was discontinued and replaced by an approach based on co-operation and partnership [45]. However, the purchaser-provider model was retained to give the purchasers the ability to change providers only as a last resort. The independent contractor status of the general practitioners remains unchanged and they continue to receive directly the various fees and allowances for providing medical services.

In 2004 approximately 85 percent of the total UK health expenditures was publicly funded [48]. However, the percentage of the public covered by private insurance has been growing since the late 1970's. Currently, private insurance accounts for about 15 percent of the health care expenditure and is provided by both for-profit and not-for-profit insurers. It allows for higher quality of comfort and privacy, advantage of choice of specialists and avoidance of longer wait-times for some elective surgeries [49].

To summarize, the health care system in the UK is primarily a public funded system. It is similar to the Canadian health care system in that it provides universal coverage and free access to all. This is the primary goal of the NHS which is being successfully met. The introduction of quasi-market forces was not well received by both health care professionals and the public as it failed to improve the system. The current system is based on co-operation and partnerships between various health care professionals and providers such as hospitals to guarantee the best possible service. It provides health care services to all based on need and not on ability to pay which reflects the concept of health care as a public right.

The Canadian health care system is influenced by both the USA and the UK health systems in terms of funding and delivery. The option of introducing a parallel two-tier health care system which allows for private competition and market choice is similar to the USA health care model. Another option to expand the role of public insurance to cover for health care services while maintaining a small portion of private insurance coverage is similar to the UK health care model.

The development of any future health care system in Canada should be economically feasible and sustainable while maintaining its fundamental principle of providing service based on need and not on ability to pay. The next section will address in detail the on-going debate on how to fund health care by exploring the various options being considered.

2.4 The Funding Debate

The Canadian health care system constitutes a mixed system of funding—mainly public funding for physician and hospital services, and mixed private and public funding for other services including drugs, home care, eye care, dental care, etc. The cost for the majority of health services is borne by the government primarily through taxation.

The ability of the health care system to meet the health needs of the Canadian population is affected by factors such as limited physical resources, equipment and medical technology; limited fiscal resources to address health care needs; imbalance in the supply, distribution and scope of practice of health care providers; demographic changes that make certain services more important than they were in the past and the growing expectations of Canadians in increasing the range of treatments covered by the universal health care system [5, 34, 35]. In addition, the system is being challenged to provide care to the people with chronic and degenerative medical conditions.

Diseases such as cancer, heart problems and respiratory illness are becoming a major cause of concern in present day Canadian society. Projected estimates show a steady increase in the population of the elderly over the

coming years. The percentage of people over 65 years of age will increase by 85 percent by 2050. At the same time the percentage of the working Canadians is decreasing [36]. These demographic changes mean that a greater number of people will be living with chronic disease conditions for a longer period of time. The health care system is expected to face constant pressure to control costs and to identify new sources of funding [12].

The health care funding debate is a major issue in Canada, and much of the debate centers around which services need to be covered by public funding and which services need to be paid for privately. Private spending is generally concentrated in areas such as drugs, dental and eye care. Apart from these services, many Canadians are also paying out-of-pocket for complementary and alternative drugs and therapies [6].

To control the rising costs of public and private health care, policy makers, government and stakeholders of Canada's health care are considering various options. These include: 1) providing more public funds; 2) providing more private funds in the form of co-payments and deductibles; 3) introducing a two-tier health care system; 4) introducing a Medical Savings Account system (MSA); 5) reorganization of the present system; or 6) introducing a more publicly managed system [7, 13, 34, 50].

One proposed option is to ration and de-insure certain medical services [7]. For example, in the American health care system, rationing of medical services is usually done through market forces - for those who do not have any form of health insurance in the form of Medicare or Medicaid, health care is available on the basis of their ability to pay [51]. If such an approach is taken, it

will be important to identify what types of services need to be de-insured to maintain the fundamental principle of access to the Canadian health care system based on need and not on ability to pay.

Another option is to introduce private health care delivery into the current system. That is, a two-tier health care system with both the public and the private sectors involved in delivering health care. This may resolve the problem surrounding huge waiting lines for medical services is being argued. There has been a concern about the waiting time for some treatments. One study found the total waiting time between referral from a general practitioner and treatment increased from 17.8 weeks (3 months) in 2006 to 18.3 weeks (3.7 months in 2007 [13].

The availability of certain medical services through private delivery would help reduce the problem of long waiting queues and also prevent Canadians from traveling to the USA or other foreign countries to seek medical services for relief from their medical problems [13, 52]. With the introduction of private delivery and payment for the private services, the question of maintaining the objective of the health care system, which is service based on need and not on patient ability to pay, is a cause for concern.

The introduction of user-fees and out-of-pocket payments is another alternative suggested to curb abuse and unnecessary use of the health care system [50]. The Romanow Commission in 2002 stated that user fees for hospital and physician services should be banned because it may put a burden on the poor and impede their access to health care [6].

The introduction of a Medical Savings Account system (MSA) is another option [35, 50]. Instead of generating revenue through user-fees and out-of-pocket payments, it is suggested that MSA's can be used to control health care costs. MSA's are savings accounts where each individual/family would have a pre-determined amount of funds available to cover all routine health care costs. Contributions to the account could be through the individual, employer, government and/or a combination of the three. The cost for additional health services such as catastrophic illness and expensive treatments may or may not be included in the MSA. The additional expenses need to be borne directly by the individual, through services available from the state or public funded system or through high-deductible insurance plans whose premiums may come from the MSA [53, 54]. Its usage would be solely dependant on the individual holding the account. MSA's are beneficial in reducing the unnecessary use or abuse of the system because there is only a fixed amount of money available to each individual and any requirement of funds above the fixed amount has to be paid directly by the individual out-of-pocket. The MSA model would encourage people to make independent health-related decisions. This would mean an increased autonomy and also an increased incentive to not rush to the doctor for every illness [35].

Although increased autonomy to make independent health care decisions and manage one's health care costs are held forth as the advantages of MSA, critics argue that MSA's would result in under-utilization of the health care system [14, 35]. A financial incentive to manage one's medical account would encourage people to save money and avoid getting a minor health problem

checked until it becomes a major one and this under use might result in higher long term costs to the system [14, 35].

The introduction of a salaried system for physicians and other health care professionals is another alternative to be considered in order to curtail health costs to the system [55]. In the National Health Service in UK, some of the health care professionals receive a fixed salary, for a fixed number of hours per week. This does not provide the professional an opportunity to charge additional fee-for-service, but it might encourage them to minimize or shorten the number of consultations since there is no incentive to retain patients or be sensitive to their needs [56]. It would encourage the health care professional to avoid recommending expensive services to patients when the same may be obtained for a lesser cost with or without coverage for the service.

However, the demands and the pressure on the current system may not bring about a radical change in the immediate future. It may be viewed either as a shared responsibility, which is a characteristic of a public right, or as an individual responsibility characterized by a commodity or a private consumption good. The balance we settle on should reflect what we value as a society and how we perceive health care. The following section will review the characteristics of these two distinct orientations to health care.

2.5 Commodity and Public Right

In this section the concepts of commodity and public right and the characteristics by which a product or service can be identified as a commodity or a public right will be discussed in relation to health care.

Changing lifestyles, health care patterns and a shift from curative medicine and hospital services to community based primary care and health promotion activities are challenging the ideals of equity and accessibility and pushing the current health care system towards change [34]. Particularly relevant is whether health care in Canada will be dominated by an emphasis on market-based approaches to meet the challenges of health care demand and supply. And through this approach, whether views of health care as a commodity or health care as a public right will dominate?

2.5.1 What is a Commodity?

A commodity can be defined as a good or a service that is traded or exchanged between distinct parties and whose relationship is created by the exchange [11]. In commerce, it is defined as a thing produced for sale that is valued for its usefulness to the consumer or its satisfaction of his or her preferences [57]. The three fundamental aspects of a commodity are:

1. A commodity exists in an exchange relationship.
2. The commodity and the exchange relationship have an instrumental value attached to them.
3. Commodities can be privately or individually consumed.

2.5.1.1 Exchange Relationship

Exchange relationships exist between two or more distinct parties where each party gives something of perceived value in return for receiving something instrumental in nature such as a reward, money [11]. This interchange creates a

relation between the distinct parties. The relation does not exist until the objects or services involved in the exchange are considered as commodities. Gifts cannot be considered as commodities, although they may be exchanged between people, because it is an act of expressing one's feelings. In a commodity market, the exchange relation exists when something of value is provided to each party [11, 58].

This can be best explained through the barter system. Traders and merchants used to trade their goods in exchange for something of equal value instead of taking money. The relation between the merchant and the buyer is solely an exchange relationship [58]. For example, an agent at the ticket counter in a bus depot makes a booking for you to travel and issues a travel ticket as a proof of the booking. The relation between you and the agent is purely an exchange relation where you pay the agent the money for issuing a ticket and receive a ticket in return. The relationship ceases to exist after you have received the travel ticket.

Similar is the case in health care delivery. A relationship is created between the person seeking the health care service and the deliverer of health care through the exchange. A person who visits the pharmacy to get a prescription filled will receive a prescription in return. The act of filling the prescription is purely an exchange between the pharmacist and the person requesting a refill. From a commodity perspective, the relation ceases to exist after the dispensing of the medication.

2.5.1.2 Value for Exchange

Any commodity that is exchanged between parties has an instrumental value attached to it. That is to say, the exchange will not exist if there is no value through the transaction [11, 58]. In a barter system, one product is traded for another product of perceived equal value. Similarly, the agent at the ticket counter will not issue a ticket until you buy the ticket by paying him the required amount. The money paid is of value in this exchange. Similarly a pharmacist will fill a prescription or provide a medicine for refill at a later date provided he/she is being paid for filling the prescription. All these different types of exchanges include something of value to the parties involved in the interchange.

The interests, wants and needs of the parties exist prior to the exchange relationship and these are served instrumentally [11]. So it is extrinsic in the sense that one is involved in the exchange, uses it as a means to satisfy one's interests, needs, wants and then moves on. In the process of attaining the wants and needs through the instrumentally served relationship one might come across further wants or needs which initiate further exchange relationships [11].

2.5.1.3 Private Consumption of Commodities

A commodity is a good or service that belongs to the individual who buys it [11, 57, 58]. Commodities are often consumed by the owner and cease to exist after it is consumed. The travel ticket is not valid or does not exist after the person who has bought the ticket has made the trip. The ticket is for the sole consumption of the person traveling and cannot be used by another person. Similarly the patient who has requested a refill of a prescription is the person

who will consume or use the medicine and once it has been used the prescription ceases to exist and hence the patient will have to return for a refill if required.

2.5.2 Health Care as a Commodity

In the delivery of health care, the relationship between the provider and the consumer is based on three elements- the professional competence of the provider, the moral authority to provide the health care service and the empathy to provide care [59]. Professional competence comes with the knowledge gained by studying and practicing the profession. The type of treatment to be provided to a patient is assessed by the health professional based on the situation of the patient. The patient has the right to confirm the professional's competence and basis for his/her recommendations. As a deliverer of health care, the professional has a moral authority to assume responsibility and make clear recommendations for the good and healthy state of their individual patients. Empathic authority pertains to the health care professional being concerned about the patient and treating him like a friend. It is these three elements put together that define the type of relationship that exists between the health care provider and the consumer.

Professional competence and moral authority must be explicit when health care is a commodity [59]. This allows the consumer to shop around for the best medical services available based on professional competence, and even though there is a need for guidance and advice at times (involving moral authority), the consumers have the freedom to reject the recommendations

made by the health care provider. This essentially provides the consumer with a free market place whereby the cost, price, availability and distribution of health care are not constrained by government regulations [57, 59].

In a commodity market, the consumers and purchasers of health care services are free to choose their providers based on individual needs and costs suitable to them. The health care providers compete with each other in providing quality services at a price that satisfies the consumers and keeps their market share and profits. Ideally, costs decline and the quality is maintained or improved. This competition can reduce wastage, overuse and error to the advantage of everyone [57, 60].

Corporate organization of medical practice and a competitive market economy are transforming health care services into commodities [60]. Physicians and other health professionals are becoming salaried employees in hospitals, group practices and HMO's. This trend is being observed more in the USA where health care givers are becoming employees and their decisions are based on conserving the resources of the corporation [51]. Regardless of working for a profit or a non-profit corporation, the health care givers are directed by standard guidelines to be followed in their practice. These guidelines are useful to a certain extent, but may also jeopardize the nature of personal relationship involved in providing care [60].

The exchange relationship between the health care provider and the consumer can be described as a means to an end where they are interested in the relationship as long as there is something of value to them [11]. The implications of commodification of health care on the personal relationship

between the consumer and the provider may lead to mistrust and a lack of confidence in the health care provider [57]. This could further affect the performance of the health care giver as he/she would be expected to act or practice based on the attitudes of the consumer- prescribing more preferred and expensive medicines or tests without a clear need for these treatments.

2.5.3 Health Care as a Public Right

Health care as a public right involves a collective effort by the health care providers and the members of the community to create a healthy and happy community [11, 57]. It aims to provide something of common value to society. The relationship involves confidence and trust between the health care professional and the patient [11]. For example, controlling and preventing the spread of infections and diseases by providing for adequate medicines, increasing awareness about eating a nutritious diet and modifying the lifestyle through adequate exercise and providing for facilities, such as a community gymnasium, can be described as acts of public right [11].

The sick often rely on a community that can deliver medical services with care and provide an assurance of not excluding them from the community [11]. These can be achieved by treating health care as a public right. This helps practitioners to view health care in a distinct ethical perspective and in a social context where the practice of caring in a community is primary [11]. Hence, it is not subject to the market place or profit calculations unlike the commodity concept. The rules and regulations are often directed by the government in order

to provide a fair ground for all the sections of the society. So this allows for very little competition and focuses on providing universal care accessible to all [57].

It is anticipated that health care professionals, including pharmacists, daily practice may be influenced by the different expectations and characteristics that describe a public right and commodity. Therefore the next section will consider how the defined characteristics of a commodity and public right may influence the role of pharmacists in Canada's health care system in terms of health care delivery and support for funding.

2.6 Role of Pharmacists in Canada's Health Care System

The profession of pharmacy continues to undergo progressive change in order to match current demands and provide a sustainable quality of health care to people. Pharmacists have been frequently required to change or modify what they do. It is essential for pharmacists to assume new practice responsibilities to meet the new obligations of "drug use control...governed by awareness of and commitment to the patient's interest" [61]. Holland and Nimmo, in their series of articles, highlight the five major shifts in pharmacy practice beginning with the 17th century model [62-66].

During the period 1860-1870, pharmacy was primarily involved with the manufacturing of medicines. Pharmacists used home-remedies and their own recipes to prepare medicines. They were also responsible for prescribing and dispensing of these medicines. Hence their role involved the duties of a physician as well. They also provided counseling and advice on the different

medicines they prepared. In short, the apothecary was a combination of today's pharmaceutical industry, drug store and primary care provider [62].

In the 1870's following the emergence of pharmaceutical industries the manufacturing of drugs was no more a responsibility of the pharmacy. The industry manufactured the drugs and the pharmacy was involved in compounding and providing advice and guidance to the patients about their drugs [62].

The third shift in the professional practice was seen during the 1950's where the responsibilities of the pharmacy primarily involved the distribution of drugs. Community pharmacists were limited to the dispensing of drugs and were no longer involved in prescribing. Hepler states that the community pharmacy lost social purpose and "the pharmacy became a channel of distribution for the pharmaceutical industry" [61].

In the 1960's, apart from dispensing, pharmacists were involved in medication counseling and included clinical pharmacy in their daily practice. Based on their specialized knowledge about drug action and use of medicines, they assisted the physicians in making good decisions about patients' medications.

With the introduction of pharmaceutical care as a pharmacy model in the 1990's, apart from the regular functions of dispensing and medication counseling, pharmacists were encouraged to become involved in monitoring patient outcomes and health promotion activities [62].

Pharmacists are often required to learn or incorporate new skills and attitudes as they face transitions in their area of practice [63]. The ability to learn

new skills may be influenced by the government health policies, payment systems and other motivational factors.

Pharmacists play a direct and personal role in the health care of patients along with physicians and nurses. They are often involved in providing cognitive services to their patients. Cognitive services can be defined as services provided by a pharmacist to, or for, a patient or health care professional that go beyond regular professional activities such as dispensing and routine medication counseling [19, 67]. It is a special service that is unique, useful and held in high esteem by the public. They are frequently involved in providing cognitive services such as disease management recommendations, educational seminars on the prevention and treatment of diseases and demonstration or handling of health monitoring devices like blood pressure meters [67, 68]. These services improve specific health outcomes, patient quality of life and also help to reduce drug costs to the health care system.

Pharmacists are the primary provider of drug related information as they are the most accessible health care professionals present in various health care setting such as hospitals and community pharmacies [69]. They recognize the impact of their contribution in improving pharmaceutical care and provision of cognitive services. They often take on increasing responsibilities in improving the quality of services to patients but literature states that they are often overworked and stressed in their roles [70, 71]. Pharmacists often find it difficult to strike a balance between performing routine activities such as dispensing medications and providing cognitive services to their patients [70]. This is due to lack of time and staff and excessive workload [71, 72]. Also, there are a few

other barriers such as lack of reimbursement that prevent pharmacists from providing cognitive services [73]. Programs that provide reimbursement for cognitive services are being implemented but are still not common [74]. A study of pharmacists in Quebec showed differences in billing behavior based on age and workload. Pharmacists younger in age or with less than six years of practice experience showed more confidence in their role and were associated with increased billing for services than older pharmacists [75]. In addition to addressing these barriers by introducing reimbursement programs, it is also necessary to quantify pharmacists' opinion on reimbursement services with respect to who should pay, how much and for what type of cognitive services.

Pharmacists expect rewards for their services [74, 76]. The rewards motivate pharmacists to provide cognitive services and these rewards could be professional, personal or monetary in nature. Pharmacists provide unique and useful services to patients which lead to professional fulfillment [73]. A study conducted on community pharmacists to measure the perceived importance of three motivational factors (professional reward, financial reward, compliance with legal or contractual third party prescription programs) found that professional reward ranked second after financial reward [73].

A national survey conducted on pharmacists to study their attitudes towards work life and how variables influence work attitudes showed that 70 percent experienced job stress in their work place. However, more than 65 percent appeared to be satisfied with their jobs. This contradictory finding may be explained if pharmacists are willing to accept job stress as part of their work provided the rewards they receive are significant [70]. The type of tasks

pharmacists are expected to perform on a daily basis directly impacts their motivation on a professional level. A majority would prefer to focus on consultation (62%) and drug use management (59%). Also, most of them prefer to do less of dispensing (94%) and business management (89%) [70]. These results suggest that pharmacists want to spend more time on tasks that directly impact patient health which contributes to professional and personal motivation.

Pharmacists also want to provide good patient care through counseling services and organizing and implementing patient education programs in their pharmacy, provided they receive recognition from their patients [67, 73, 74, 76].

Pharmacists and other health care providers are expected to ensure the health and well-being of their patients. Pharmacists are considered to be service professionals who display values, attitudes and beliefs that put the needs of others above their own personal needs [77, 78]. This focus on altruism or service to others is expected to be their primary objective. There is also a business aspect to the profession which deals with dispensing and retailing activities with a profit motive [79]. A study about the intrinsic (altruism) and extrinsic (income, prestige) factors that motivate pharmacists was conducted comparing pharmacists with a business-role orientation to those with a professional-role orientation [79]. Pharmacists who valued the business management aspect of their job were considered business-role oriented. Those who valued the professional aspects such as dispensing, team work and keeping abreast of professional literature were considered professional-role oriented. The results indicated that both altruistic and income factors were

equally important to pharmacists irrespective of their role orientations (business or professional).

In a national survey conducted in 1999 regarding the opinions of the general public and health care providers on the most pressing health care issues, both the public (57%) and health care providers (71% of physicians, 67% of nurses and 71% of pharmacists) believed that health care professionals such as doctors, nurses and pharmacists should take a lead role in setting policies to protect patients and ensure they get the best care possible [16]. In a follow-up survey in 2003 about who has the strongest voice in health care reform in Canada, about 38% stated health care professionals and 42% stated federal and provincial governments. When asked who should ideally have the strongest voice in health care reforms, 42% Canadians said health care professionals [17]. This suggests a general desire among the public that health care professionals such as doctors, nurses and pharmacists be more involved in framing health policies as they are seen to offer innovative ideas and solutions for health care problems [18].

On the other hand, due to government cutbacks in health care services and spending, there has been growing unrest and frustration amongst practitioners [80]. This has led to a push for more public funds for expensive and state of art medical services in order to better serve the general public and particularly, the aging population. At the same time, there exists a persistent demand for a parallel private system operating alongside the public system [80].

“I want the people to have the right to buy private medical services...right to purchase private insurance...Health professionals should be obliged to

work a certain number of hours per week in the public system and then have the option to work privately for another set period,” J. Chaoulli [81].

The Canadian Pharmacists Association (CPhA) which represents licensed pharmacists in Canada makes recommendations to assist policy makers in decisions on health policy. Submissions were made by the CPhA to the Kirby Committee and the Romanow Commission in 2001 [69, 82]. Their submission to the Kirby Committee supported the need for reform of the current hierarchy of health care professionals by changing their scope of practice to improve patient access and reduce costs. Another recommendation was to study new practice models for pharmacists with new methods for reimbursement. Other recommendations addressed shortage of pharmacists and prescription drug issues [82].

Their submission to the Romanow Commission provided recommendations to address the following challenges in the health care system- public education about wellness and disease, screening to detect early disease, appropriate use of drugs, development of the role of information technology, better home care, efficient use of hospital resources, management of the cost of pharmaceuticals, better regulation of pharmaceuticals, the need to consider a national public drug plan and development of new models of pharmacy practice [69].

Pharmacists make significant contributions at virtually every point in the provision of health care, from health promotion and prevention to palliative care. It is clear that the public would like them to play an increasing role in framing health policies. The increasing responsibilities and varied expectations of

pharmacists from within the health care community and outside affect their role and performance. The organization and funding model of the current and any future health care system will affect pharmacists' motivation and practice. It is useful to obtain pharmacists' views about the current health care system, specifically, their attitude towards health care as a commodity or as a public right and how best they think it should be financed to provide universal care.

2.7 Summary

The Canadian health care system continues to evolve. Historically, it was primarily a commodity oriented system where people paid for most of the health care services. The delivery was through private organizations and the government played a minimal role during the Pre-Confederation period. The Post-Confederation period consisted of reform movements and the formation of the Canadian government. Improvements in living standards and advancements in medical science made people turn towards the government for financial support. The Post-Second World War period saw the emergence of different health care acts which defined the support and funding for the universal health care system.

The changing needs and increasing health care costs have led to a re-examination of the sustainability and cost-effectiveness of the current Canadian health care system. The health care debate in Canada is currently focused on the different options for funding the present system. The different options of funding are being compared with the privately financed health care system such as in the USA and the publicly financed health care system such as in the UK.

This debate can also be interpreted as to whether Canadian health care can be viewed as a commodity (privately financed) or a public right (publicly financed).

Pharmacists, as health care professionals, are important stakeholders in the debate. Along with physicians and nurses, pharmacists play a direct and personal role in health care delivery and the experience of patients within the system. Therefore their participation is critical to the shaping of a future Canadian health care system. Hence it seems valuable to study pharmacists' views on health care as a commodity or a public right.

The literature reviewed did not provide any evidence of a scale to measure pharmacists' attitudes. Therefore this study formulates a scale to measure the attitudes/perceptions of pharmacists towards the health care system and their support for the different funding options being debated.

CHAPTER 3

METHODOLOGY

3.1 Study Design

A mail questionnaire was developed and used for this study. A modified Tailored Design Approach was followed in the style and structure of the wording for writing questions, construction of the questionnaire and the method of implementation of the survey. To enhance the response rate, a four-step process (see Section 3.5) was followed in conducting the study [83, 84].

To measure variables such as perceptions, evaluations, feelings, attitudes, behaviors etc researchers often construct their own scales. Such scales rely on the research subject's verbal report or response which is structured and limited to the given choices. Likert scales are often used for such variable measurements because they can be easily used with ordinary SPSS programs [85]. Six-point Likert scales were used to design the instrument as it allowed for wider choice and simplicity of the responses.

The length of the questionnaire was six pages, with an average of seven questions on each page. This was done to prevent over crowding and ensure easier reading of the questionnaire. Questionnaire items that did not follow the six-point Likert scale format were the demographic characteristics of the respondent.

The time required to complete the survey was approximately fifteen minutes and it could be classified as moderate in length. Keeping in mind the limited time constraints and the nature of work of a practicing pharmacist, the objective of the survey was to balance the length with the need to cover the subject in a comprehensive manner.

3.2 Study Population

The study population consisted of all licensed pharmacists working in community practice in the province of Saskatchewan. In 2005, a list of registered pharmacists was received from the Saskatchewan College of Pharmacists. After excluding hospital-based pharmacists, the study population comprising of Saskatchewan community pharmacists numbered around 850. A random study sample of 300 community pharmacists was generated for this study. The number was judged sufficient to allow for principal component factor analysis and reliability testing of the various items and constructs.

3.3 Measures

The item measures used in this study were developed for the purpose of gaining a better understanding of how the performance of the day-to-day activities of community pharmacists might be influenced by their attitudes towards health care as a commodity or as a public right. Items were also developed to gain insight on pharmacists' support for various options available to fund the current health care system. Initially an item pool was created by studying the relevant literature from which the appropriate items were chosen for

the final study. The specific items included in each section of the questionnaire are described below.

Part A – Paying for Cognitive Services: The objective in this section was to identify whether community pharmacists considered provision of cognitive services to patients free of charge as a routine activity or preferred reimbursement for their services [72-75].

If pharmacists sought reimbursement, to what extent was the degree of payment influenced by the patient's financial status? That is, do pharmacists compare themselves to other professional groups such as lawyers who expect to be paid for the amount of service rendered without any consideration of their client's finances? Will pharmacists consider not providing beneficial services to patients who are unable or unwilling to pay or will they provide services to everyone without any distinction?

In addition, further items were designed to understand to what extent pharmacists wanted reimbursement to be based on the amount of their effort irrespective of patient health benefit.

The reasoning behind the design of these questions was to measure pharmacists' perceptions of health care as a commodity or a public right. The responses would help understand to what extent pharmacists expected degree of compensation is influenced by patient health benefit and ability to pay.

Part B – Adjusting Time and Income to Improve Patient Outcomes:

Questions in this section were designed to quantify how much, if any, of their personal time and monetary benefit, pharmacists are willing to adjust to improve patient outcomes. Patient health gain, reduction in drug costs to

patients and improved patient access to prescription drugs are important patient outcomes that influence the well-being of the health care system [71].

Pharmacists are willing to contribute to improve patient outcomes but are overworked and therefore do not have additional time to provide cognitive services. They also cite financial compensation as an important motivator in providing these services [70-73, 86]. Given this information, the first three items focused on measuring to what extent pharmacists were willing to make income adjustments on a regular basis in order to improve each of the three above mentioned patient outcomes. The next three questions measured their willingness to work longer hours on a regular basis for no additional income to improve the three patient outcomes. The last item measured their willingness to provide short-term services like one-day cholesterol screening free of charge to improve patient health.

Part C – Outcomes and Rewards: This section attempted to quantify the importance pharmacists place on each of the following type of rewards – professional, personal and financial. Also, to what extent each of the above three rewards motivated pharmacists in providing cognitive services was studied.

Professional rewards derived from patient health gain, provision of services catering to patient needs and demonstrating clear benefit to patients motivate pharmacists to provide cognitive services. Personal rewards such as customer appreciation and loyalty and financial rewards such as profit generation also are motivating factors [73, 74, 76].

The first three questions attempted to measure the relative level of importance pharmacists placed on profit generation, patient preference and patient health benefit as motivating factors when adding a new cognitive service. Three other questions addressed whether pharmacists are willing to provide a new cognitive service free of charge if the patient health gain expected was major, moderate or only minor. In a previous study a scale was developed to measure professional equity (intrinsic, recognition and financial equity) among Canadian physicians [87]. In this study, two items which focused on the importance of personal rewards, such as patient appreciation and customer loyalty, to pharmacists were taken and modified from the physician study. Further, two items questioned whether pharmacists linked their financial reward to the amount of benefit a patient receives.

The responses will help understand the extent of the relationship, if any, between pharmacists' perceptions of health care as a commodity or as a public right and the type of rewards they expected for their services.

Part D – Health Policy: The ongoing debate in Canada addresses the sustainability of the current health care system and the emergence of private insurance [6]. The government, experts and various stake holders including health care providers are exploring different options to reduce health care costs to provide a system which caters successfully to the basic needs of Canadians [6, 7]. Some of the options being considered are providing more public funds, providing more private funds in the form of co-payments and deductibles, introducing a two-tier health care system and introducing a more publicly managed system [7, 13, 35, 50].

Due to their direct interactions with patients, pharmacists are in a good position to understand the shortcomings of the present system in dealing with patient needs and expectations with respect to coverage and benefits. Also, any change to the current system may directly affect a pharmacist's role, responsibility, work environment and monetary benefit.

Previously, a study to obtain physicians' views on the different funding options for health care in Canada was conducted in the province of Saskatchewan and British Columbia [88]. The items in the physician study were used in this section to obtain pharmacists' views on the different funding options that are critical to the health care debate.

Part E – The Pharmacy: This section provided information about the pharmacy setting of the respondent. Information about the area, location and type of pharmacy were obtained.

Part F – The Pharmacist Completing the Questionnaire: The demographic information relating to the gender, age, current position (job title), the year of first licensure as a pharmacist and the number of years the respondent was practicing in the current position was obtained from the community pharmacists.

Part G – Comments: An open-ended section in the questionnaire was provided where the respondent was free to add any additional information or comments on the subject matter relevant to the questionnaire. The information gathered from this section was not included in the data analysis but contributed to writing the discussion on the research findings.

3.4 Data Analysis

For appropriateness and clarity of questions, the questionnaire was pilot tested on five community pharmacists. The content of the questionnaire was further strengthened through review by an expert in Health Policy in the College of Commerce. No changes were recommended to the questionnaire.

Since the study was descriptive in nature, the statistical analysis involved using descriptive statistics to explore means, medians, modes, standard deviation and ranges. The results are displayed in Chapter 4 according to sections in the questionnaires.

The data obtained through responses to individual items were ordinal in nature whereas data on demographic information such as age, current position of respondent, year of first licensure, area, location and pharmacy type are categorical. Comparative analysis of individual items based on the variables of the study (gender, age, current position of the respondent, year of first licensure, area, location and pharmacy type) was performed using nonparametric tests, in particular the Mann-Whitney U Test and Kruskal-Wallis Test. Comparative analysis helped to identify whether or not there were any differences in responses to individual items based on the variables of the study.

For post-hoc analysis of more than two groups of non-parametric data, the Bonferroni test was used. The statistical significance was set at $p < 0.05$ for comparative analysis and post-hoc analysis.

The study involved the development of a survey instrument and hence it was necessary to assess survey validity and reliability [89, 90]. Construct validity was performed using principal component factor analysis to identify relationships

between variables and to identify the items that could be grouped into constructs. Internal consistency of the items was strengthened by using inter-item correlation to obtain a Cronbach's Alpha value of the standardized items (> 0.700).

Comparative analyses of the resulting constructs were carried out using Independent t-test and one-way ANOVA (interval type of data). Comparative analysis identified whether or not there were differences in responses to the items in the constructs based on the variables of the study and specifically amongst which groups. For post-hoc analysis, Scheffe's test was used to identify statistically significant differences ($p < 0.05$) between responses. Correlation statistics of the different items was computed using both parametric (Pearson's correlation coefficient) and non-parametric (Spearman's correlation coefficient) tests.

3.5 Questionnaire Distribution and Data Collection

One week prior to the questionnaire (Appendix A) mailing, an overview of the research and the reasons for the survey was sent to the sample (Appendix B). This gave respondents an idea of the reasoning behind the research, why they were selected for the study and the importance of a high response rate.

The first questionnaire was mailed out one week later along with a cover letter (Appendix C) and a pre-stamped return envelope. Two weeks later, a reminder postcard (Appendix D) was sent to those who had not yet responded.

Based on prior experience with surveys to pharmacists it was anticipated that the response would be around 40% (>120 respondents). "Surveys on health

related topics typically achieve better response rates than those on more general issues” [84]. To achieve a response rate above 40%, a second wave was planned and mailed out two weeks after the reminder postcard and included a cover letter (Appendix E) and a pre stamped return envelope. Four weeks after the second wave of the survey was sent out data collection concluded. Each questionnaire was coded for administrative purposes.

The timeline for conducting the research was

September 5, 2005: Pre-notice letter mailed out

September 12, 2005: First wave of survey mailed out

September 26, 2005: Reminder postcard mailed out

October 10, 2005: Second wave of survey mailed out

November 7, 2005: Data collection concluded

3.6 Data Entry

The analytical plan commenced once the data from all respondents was compiled into the database using the Statistical Package for Social Sciences (SPSS © 12.0 for Windows).

3.6.1 Recoding

Once all the data was entered into SPSS, it was recoded for analysis purposes. In some cases, collapsing and recoding of data was carried out to allow for easier interpretation of displayed results. All recoding was done before performing the analysis for this study.

While generating summary tables of individual sections and performing comparative analysis, the “No opinion” responses were collapsed with the missing data. In order to generate reliable scales of items using Factor analysis, items which showed negative covariance were recoded in the following order of preference - Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Somewhat Agree (4), Agree (5), Strongly Agree (6).

The demographic information captured in Section E, F of the questionnaire was recoded as categorical data.

3.7 Ethical Considerations

Due to the nature of the research requiring input from community pharmacists’ ethics approval was required. An application was submitted to the University of Saskatchewan Behavioural Research Ethics Board in April, 2005. Approval was granted on August 18, 2005 (Appendix F).

CHAPTER 4

RESULTS

The results obtained from data analyzed for this study is presented in this section. A description of the response rate and demographic characteristics of the respondents is followed by a detailed analysis of the research questions posed in the different sections of the questionnaire.

4.1 Response Rate

The mailing list was comprised of 300 community pharmacists obtained from the Saskatchewan College of Pharmacists. After the initial mailing of the questionnaires, 138 questionnaires were returned for a response rate of 46.0 percent (138/300). Due to a change in address, one questionnaire could not be delivered and was returned. The total number of pharmacists for the study population was reduced to 299. Following the second mailing of the questionnaire, 58 more were returned. Six additional questionnaires were received after the completion of the study, but were not included in the analysis. In total, there were 197 eligible questionnaires of which 192 were completed. The final response rate was calculated to be 64.2 percent (192/299).

4.2 Demographic Characteristics

The characteristics of the respondent are presented in Table 4.1. Of the 192 respondents, 120 (62.5%) were female. The mean age of those reporting their age (177 of 192) was 41.8 years, with a median age of 40 years and a range of 23 to 80 years.

Most respondents (185) indicated the year they received their first license as a pharmacist. The mean year was 1986 with a median of 1988, and the range was from 1950 to 2005. Of those reporting their current position, 44 indicated they were owners (22.9%), 46 pharmacy managers (24.0%), and 98 staff pharmacists (51.0%).

There were 188 respondents who answered the question on where their pharmacy was situated, with 33.9 percent in commercial areas, 25.5 percent in residential, and 38.5 percent in mixed areas. The largest proportion was located in stand alone buildings (44.8%), with 19.8 percent located in strip malls, 17.7 percent in enclosed malls and 12.5 percent in a medical building/complex. Based on pharmacy type 26.6 percent of the respondents practiced in an independent pharmacy, 13.0 percent in a banner type of pharmacy, 13.5 percent in chain pharmacies, 18.2 percent in a franchise, 21.4 percent in a grocery store, 3.1 percent in a department store, 2.1 percent in a mass merchandiser and 1.6 percent were classified as *other*.

The data obtained from the question on the number of years in the current position was not used in the analysis. A number of respondents appeared to report the number of years in their present position, while the

question sought to measure the number of years the respondent practiced in his/her profession.

Table 4.1 Demographic Information

Variable	Total Responses	
	N	%
Gender		
Male	72	37.5
Female	120	62.5
Total	191	100.0
Position		
Owner	44	22.9
Staff Pharmacist	98	51.0
Pharmacy Manager	46	24.0
Total	188	100.0
Area		
Commercial	65	33.9
Residential	49	25.5
Mixed	74	38.5
Total	188	100.0
Location		
Stand Alone Building	86	44.8
Strip Mall	38	19.8
Enclosed Mall	34	17.7
Medical Building/Complex	24	12.5
Other	8	4.2
Total	190	100.0
Type*		
Independent	51	26.6
Banner	25	13.0
Chain	26	13.5
Franchise	35	18.2
Grocery Store	41	21.4
Department Store	6	3.1
Mass Merchandiser	4	2.1
Other	3	1.6
Total	191	100.0

* Collapsed Grocery Store, Department Store, Mass Merchandiser and Other into one category *Mass Merchandiser/Grocery Store* for analysis

4.3 Summary Tables and Comparative Analysis of Individual Items

The tables summarizing the responses of individual sections of the questionnaire along with a comparative analysis of the individual sections with the variables in the study are presented. The tables are displayed in the same order as the questionnaire.

4.3.1 Payment for Cognitive Services

Section A of the questionnaire asked respondents their opinion on providing cognitive services to their patients and whether or not they considered receiving payment for these services. Respondents were also asked to indicate the level of payment they expected for providing the service. The distribution of responses for each of the six questions is displayed in Table 4.2 (Pricing and Payment Expected by Pharmacists' for Cognitive Services).

Respondents tended to agree with the statement *cognitive pharmacy services shown to benefit patients should be offered for a pre-determined fee (provided only to those patients willing to pay)*. More than two of five respondents (43.8%) agreed or strongly agreed while less than one in five (17.7%) disagreed or strongly disagreed.

When asked whether *cognitive pharmacy services should be offered based on the ability to pay (those able to pay more would subsidize those less able to pay)*, far fewer agreed or strongly agreed (8.9%). Most disagreed with the statement with 46.9 percent disagreeing or strongly disagreeing.

Respondents were even more likely to disagree with *providing cognitive pharmacy services free of charge to their patients (included under services*

covered by existing professional/dispensing fees). More than half (61.5%) disagreed or strongly disagreed with 9.4 percent agreeing or strongly agreeing.

When asked *if a fee charged for a cognitive service should be based on the cost of providing the service rather than the amount of benefit a patient receives*, most agreed (55.7%) or strongly agreed (10.4%) with this statement.

There was also substantial agreement with the statement *pharmacists should continue to provide OTC drug counseling free of charge* with 54.7 percent agreeing or strongly agreeing.

In response to the item *whether pharmacists should be able to charge more when patients request more extensive counseling due to complex diseases or medication regimes*, most of the respondents agreed (47.4%) or strongly agreed (16.7%).

Table 4.2 Pricing and Payment Expected by Pharmacists' for Cognitive Services

Questions	Strongly Agree N (%)	Agree N (%)	Somewhat Agree N (%)	Somewhat Disagree N (%)	Disagree N (%)	Strongly Disagree N (%)	Total Responses N (%)	No opinion/ Non - Responses N (%)
1. Cognitive pharmacy services shown to benefit patients should be offered for a pre-determined fee (provided only to those patients willing to pay).	23 (12.0)	61 (31.8)	64 (33.3)	9 (4.7)	23 (12.0)	11 (5.7)	191 (99.5)	1 (0.5)
2. Cognitive pharmacy services shown to benefit patients should be offered based on the ability to pay (those able to pay more would subsidize those less able to pay).	5 (2.6)	12 (6.3)	49 (25.5)	35 (18.2)	61 (31.8)	29 (15.1)	191 (99.5)	1 (0.5)
3. Cognitive pharmacy services shown to benefit patients should be offered to all patients free of charge (included under services covered by existing professional/dispensing fees).	3 (1.6)	15 (7.8)	24 (12.5)	30 (15.6)	52 (27.1)	66 (34.4)	190 (99.0)	2 (1.0)
4. If a fee is to be charged for a cognitive service, it should be based on the cost of providing the service rather than the amount of benefit a patient receives.	20 (10.4)	107 (55.7)	46 (24.0)	5 (2.6)	7 (3.6)	1 (0.5)	186 (96.9)	6 (3.1)
5. Pharmacists should continue to provide OTC drug counseling free of charge.	15 (7.8)	90 (46.9)	54 (28.1)	19 (9.9)	7 (3.6)	5 (2.6)	190 (99.0)	2 (1.0)
6. Medication counseling is considered to be part of the dispensing process and is covered by the professional fee. However, when patients request more extensive counseling due to complex diseases or medication regimes, pharmacists should be able to charge more.	32 (16.7)	91 (47.4)	45 (23.4)	13 (6.8)	9 (4.7)	0 (0.0)	190 (99.0)	2 (1.0)

Comparative analysis showed statistically significant differences in responses to these items based on gender. To the item *cognitive pharmacy services should be offered for a pre-determined fee to the patients* (Figure 4.1), males were more likely to agree with the statement compared to female respondents ($p < 0.02$).

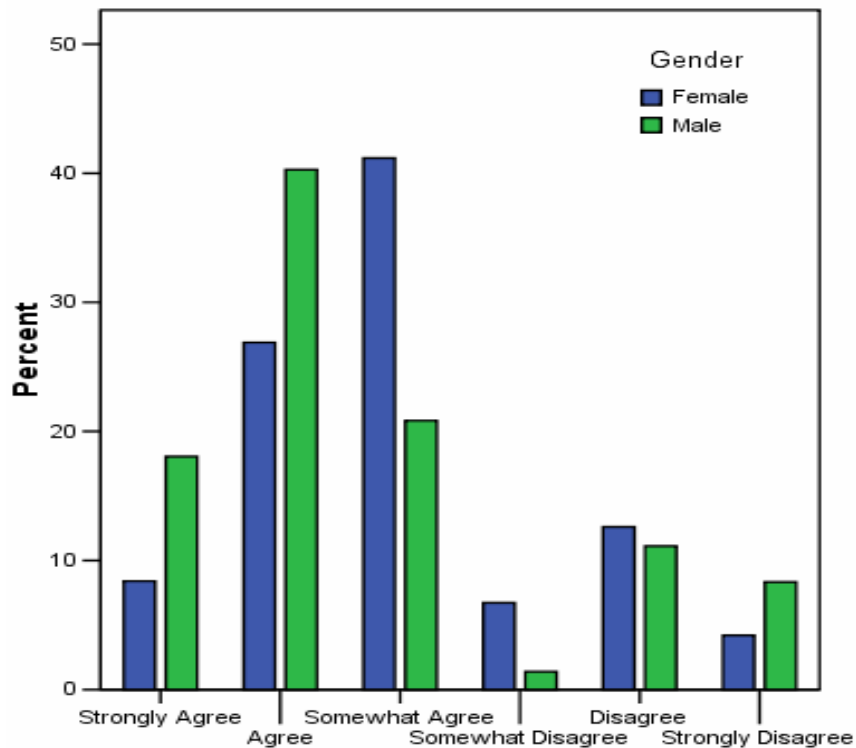


Figure 4.1 Cognitive Service for Pre-determined Fee by Gender

For the item *cognitive pharmacy services shown to benefit patients to be offered free of charge to all patients (included under services covered by existing professional/dispensing fees)* (Figure 4.2), males were more likely to disagree with the statement than female respondents ($p < 0.03$).

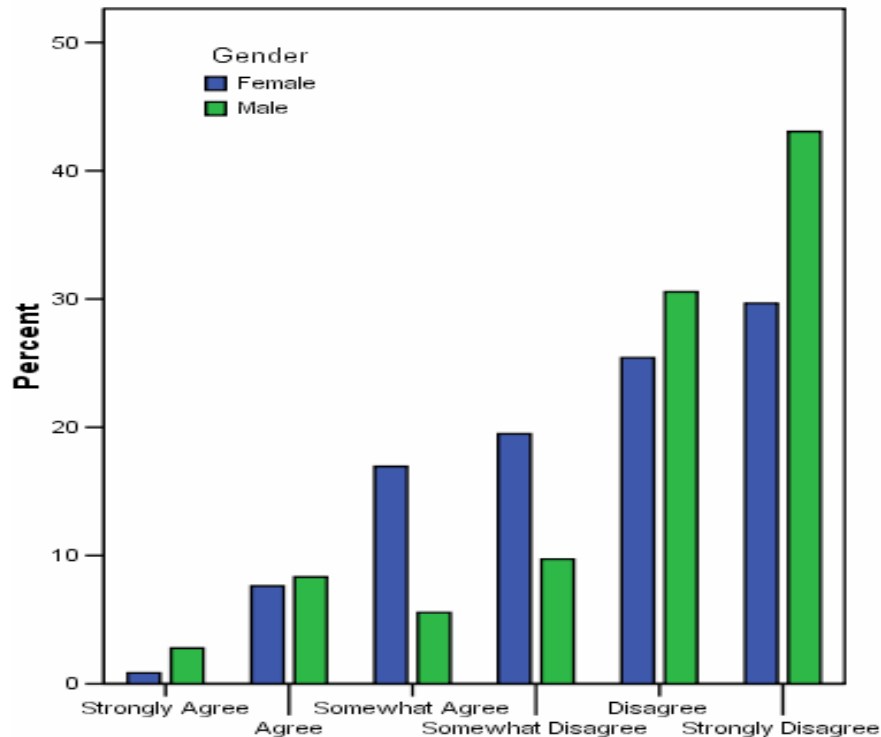


Figure 4.2 Cognitive Services Free of Charge by Gender

For the statement *a fee charged for a cognitive service should be based on the cost of providing the service rather than the amount of benefit a patient receives* (Figure 4.3), males more strongly agreed to this statement ($p < 0.03$).

A statistically significant difference in responses was also observed with regard to gender (Figure 4.4) and year of first licensure for the statement *pharmacists should be able to charge more when patients request more extensive counseling*. Males were more likely to agree to this statement when compared to female respondents ($p < 0.05$). Bonferroni analysis also revealed significant difference in responses between respondents who received their first licensure between 1981-1990 and 2001-2005 ($\chi^2 = 11.669$, $p < 0.04$). Respondents who received their first licensure during 1981-1990 were more

likely to agree to the statement when compared to the respondents who obtained their first licensure at a later period (2001-2005).

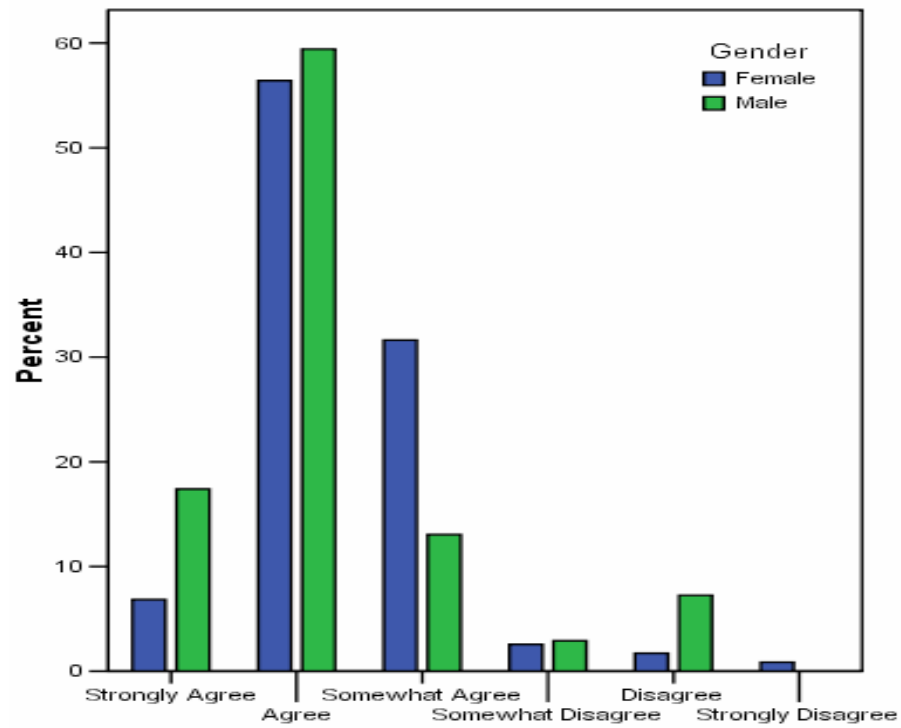


Figure 4.3 Fees Based on the Cost of Providing Service by Gender

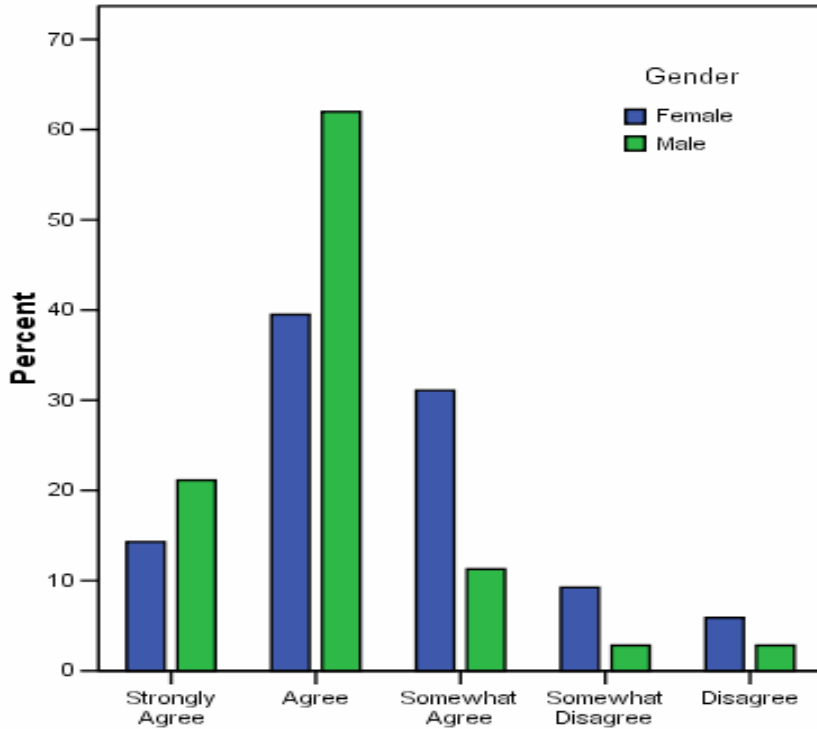


Figure 4.4 Charge More for Extensive Counseling by Gender

4.3.2 Willingness to Adjust Time and Income

Section B of the questionnaire related to pharmacists' willingness to give up time and income to improve patient outcomes. The distribution of the responses is displayed in Table 4.3 (Pharmacists' Willingness to Adjust Time and Income to Improve Patient Outcomes).

Respondents were asked *the percentage of income they would be willing to trade off in order to spend more time with their patients*. 152 (79.2%) respondents were not willing to forego their income for more time with patients, 12 (6.3%) respondents were willing to trade off 5 percent of their income, 19 (9.9%) respondents agreed to trade off 10 percent, 4 (2.1%) agreed to trade off 15 percent, 2 (1.0%) respondents agreed to trade off 20 percent of their

income. One respondent each (0.5%) agreed to trade off 1 percent, 2 percent and 25 percent of their income respectively (data not displayed).

Respondents tended to disagree with the statement *I would be willing to reduce my income if I thought it would improve patient access to prescription medicines*, with 73.5 percent disagreeing or strongly disagreeing.

When asked whether *pharmacists would be willing to reduce their income if they thought it would improve patient's health*, 60.4 percent disagreed or strongly disagreed, while 6.8 percent agreed or strongly agreed to the statement.

Respondents were even more likely to disagree with *willing to reduce income if they thought it would reduce drug costs to patients*. More than half (73.4%) disagreed or strongly disagreed.

When asked if they *would be willing to work longer providing cognitive services for no additional income to improve patient access to prescription medicines*, most disagreed (37.5%) or strongly disagreed (32.3%).

Fewer respondents disagreed with *willingness to work longer providing cognitive services for no additional income to improve patient's health*. 59.4 percent disagreed or strongly disagreed, while 8.3 percent agreed or strongly agreed.

Table 4.3 Pharmacists' Willingness to Adjust Time and Income to Improve Patient Outcomes

Questions	Strongly Agree N (%)	Agree N (%)	Somewhat Agree N (%)	Somewhat Disagree N (%)	Disagree N (%)	Strongly Disagree N (%)	Total Responses N (%)	No opinion/ Non - Responses N (%)
1. I would be willing to reduce my income if I thought this would improve patient access to prescription medicines.	0 (0.0)	4 (2.1)	19 (9.9)	24 (12.5)	76 (39.6)	65 (33.9)	188 (97.9)	4 (2.1)
2. I would be willing to reduce my income if I thought this would improve the health of my patients.	1 (0.5)	12 (6.3)	31 (16.1)	27 (14.1)	66 (34.4)	50 (26.0)	187 (97.4)	5 (2.6)
3. I would be willing to reduce my income if I thought this would reduce drug costs for my patients.	0 (0.0)	2 (1.0)	22 (11.5)	24 (12.5)	77 (40.1)	64 (33.3)	189 (98.4)	3 (1.6)
4. I would be willing to work longer hours providing a cognitive service for no additional income if I thought this would improve patient access to prescription medicines.	1 (0.5)	7 (3.6)	26 (13.5)	22 (11.5)	72 (37.5)	62 (32.3)	190 (99.0)	2 (1.0)
5. I would be willing to work longer hours providing a cognitive service for no additional income if I thought this would improve the health of my patients.	1 (0.5)	15 (7.8)	35 (18.2)	25 (13.0)	61 (31.8)	53 (27.6)	190 (99.0)	2 (1.0)
6. I would be willing to work longer hours providing a cognitive service for no additional income if I thought this would reduce drug costs for my patients.	1 (0.5)	7 (3.6)	16 (8.3)	28 (14.6)	79 (41.1)	60 (31.3)	191 (99.5)	1 (0.5)
7. I would be willing to provide a one-day clinic such as cholesterol screening free of charge for my patients if it was likely to improve the health of my patients.	8 (4.2)	51 (26.6)	61 (31.8)	24 (12.5)	22 (11.5)	21 (10.9)	187 (97.4)	5 (2.6)

There was also no substantial support for *willingness to work longer providing cognitive services for no additional income to help reduce drug costs to patients*, with 72.4 percent disagreeing or strongly disagreeing.

In response to the item whether *pharmacists would be willing to provide a one-day clinic free of charge if it was likely to improve patient's health*, 30.8 percent agreed or strongly agreed, while far fewer disagreed or strongly disagreed (22.4%).

Comparative analysis showed statistically significant difference in responses to these items based on gender. For the item *whether pharmacists would be willing to reduce their income if they thought it would improve patient access to prescription medicines* (Figure 4.5), males were more likely to strongly disagree to this statement compared to female respondents ($p < 0.03$).

A statistically significant difference in responses was also observed based on the pharmacy type of the respondent when asked whether *pharmacists would be willing to work longer hours providing a cognitive service for no additional income if they thought this would improve the health of the patients*. Independent pharmacy types were more likely to agree with the statement when compared to Chain pharmacy types ($\chi^2 = 11.075$, $p < 0.03$).

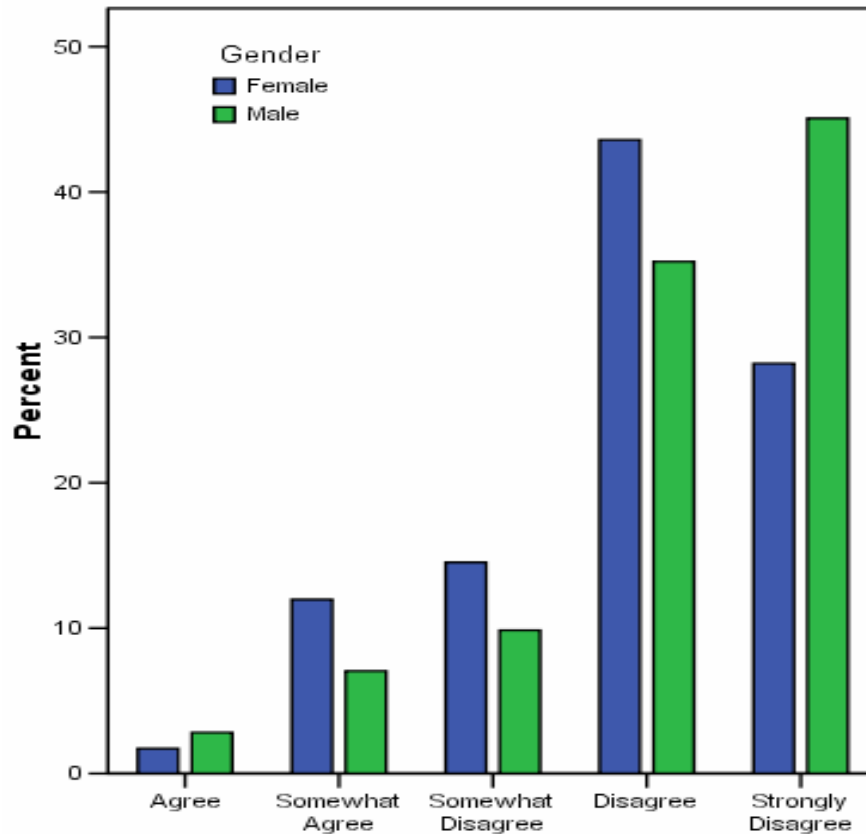


Figure 4.5 Willing to Reduce Income if it Improves Patient Access by Gender

4.3.3 Value for Pharmacy Services

Section C of the questionnaire sought to understand the contributions pharmacists make and the rewards they expect to receive for their services. Responses were analyzed using frequency distribution and are displayed in Table 4.4 (Monetary and Non-Monetary Rewards Expected by Pharmacists).

When asked *if the ability to generate a profit for the pharmacy would be a critical deciding factor when they were considering adding a new cognitive service or program*, 31.3 percent agreed or strongly agreed while 16.6 percent disagreed or strongly disagreed with the statement.

Table 4.4 Monetary and Non-Monetary Rewards Expected by Pharmacists

Questions	Strongly Agree N (%)	Agree N (%)	Somewhat Agree N (%)	Somewhat Disagree N (%)	Disagree N (%)	Strongly Disagree N (%)	Total Responses N (%)	No opinion/ Non - Responses N (%)
1. If I were considering adding a new cognitive service or program, the ability to generate a profit for the pharmacy would be a critical deciding factor.	14 (7.3)	46 (24.0)	74 (38.5)	23 (12.0)	26 (13.5)	6 (3.1)	189 (98.4)	3 (1.6)
2. If I were considering adding a new cognitive service or program, the preferences of my patients would be a critical deciding factor.	26 (13.5)	108 (56.3)	50 (26.0)	5 (2.6)	0 (0.0)	1 (0.5)	190 (99.0)	2 (1.0)
3. If I were considering adding a new cognitive service or program, the ability to demonstrate a clear benefit to patients would be a critical deciding factor.	45 (23.4)	111 (57.8)	30 (15.6)	4 (2.1)	1 (0.5)	0 (0.0)	191 (99.5)	1 (0.5)
4. The benefits a patient receives from the services I provide should not be linked to the financial rewards I receive as a pharmacist.	13 (6.8)	55 (28.6)	56 (29.2)	36 (18.8)	20 (10.4)	6 (3.1)	186 (96.9)	6 (3.1)
5. I would be willing to provide a new cognitive service free of charge, if a major health gain was expected for the patient.	2 (1.0)	49 (25.5)	73 (38.0)	25 (13.0)	27 (14.1)	11 (5.7)	187 (97.4)	5 (2.6)

Table 4.4 Monetary and Non-Monetary Rewards Expected by Pharmacists (Continued)

Questions	Strongly Agree N (%)	Agree N (%)	Somewhat Agree N (%)	Somewhat Disagree N (%)	Disagree N (%)	Strongly Disagree N (%)	Total Responses N (%)	No opinion/ Non – Responses N (%)
6. I would be willing to provide a new cognitive service free of charge, if a moderate health gain was expected for the patient.	0 (0.0)	21 (10.9)	78 (40.6)	31 (16.1)	40 (20.8)	16 (8.3)	186 (96.9)	6 (3.1)
7. I would be willing to provide a new cognitive service free of charge, if only a minor health gain was expected for the patient.	1 (0.5)	7 (3.6)	61 (31.8)	36 (18.8)	48 (25.0)	33 (17.2)	186 (96.9)	6 (3.1)
8. As an alternative to receiving an additional fee, I would provide a new cognitive service free of charge, if this was expected to increase customer loyalty to the pharmacy.	9 (4.7)	53 (27.6)	89 (46.4)	11 (5.7)	15 (7.8)	8 (4.2)	185 (96.4)	7 (3.6)
9. To ensure high quality patient care, the remuneration a pharmacist receives should be linked to the amount of benefit a patient receives.	3 (1.6)	23 (12.0)	51 (26.6)	41 (21.4)	53 (27.6)	12 (6.3)	183 (95.3)	9 (4.7)
10. I am more likely to make an extra effort for patients who express their appreciation.	41 (21.4)	67 (34.9)	60 (31.3)	12 (6.3)	7 (3.6)	1 (0.5)	188 (97.9)	4 (2.1)

Respondents tended to agree with the statement *preference of patients would be a critical deciding factor when considering adding new cognitive service or program*. More than half (69.8%) agreed or strongly agreed.

There was also substantial agreement with the statement *ability to demonstrate a clear benefit to patients would be a critical deciding factor when adding a new cognitive service or program* with 81.2 percent agreeing or strongly agreeing.

In response to the item *patient benefits through pharmacy services should not be linked to financial rewards received by pharmacists*, far fewer agreed or strongly agreed (35.4%) and less than one in five respondents disagreed or strongly disagreed.

For the item *I would be willing to provide a new cognitive service free of charge if a major health gain is expected for the patient*, 35.4 percent agreed or strongly agreed while 19.8 percent disagreed or strongly disagreed.

Respondents were not likely to agree with *willing to provide a new cognitive service free of charge for a moderate health gain to the patient*. Eleven percent agreed or strongly agreed while 29.1 percent disagreed or strongly disagreed to the statement.

Respondents were even more likely to disagree to *provide a new cognitive service free of charge for a minor health gain to the patient* with 42.2 percent disagreeing or strongly disagreeing while 3.6 percent agreed.

Respondents tended to agree to the statement *as an alternative to receiving an additional fee, pharmacists would provide a new cognitive service free of charge if this was expected to increase customer loyalty to the pharmacy*.

Close to two of five (32.3%) respondents agreed or strongly agreed while less than one in five (12.0%) disagreed or strongly disagreed.

When asked whether *pharmacists' remuneration should be linked to amount of benefits received by patients to ensure high quality patient care*, far fewer agreed or strongly agreed (13.6%). Most disagreed with the statement with 33.9 percent disagreeing or strongly disagreeing.

There was substantial agreement with *pharmacists being more likely to make an extra effort to patients who express their appreciation* with 56.3 percent agreeing or strongly agreeing.

Comparative analysis showed statistically significant differences in responses to these items based on gender. To the item *ability to generate a profit for the pharmacy would be the deciding factor when adding a new service or program* (Figure 4.6), males were more likely to agree with the statement compared to female respondents($p < 0.05$).

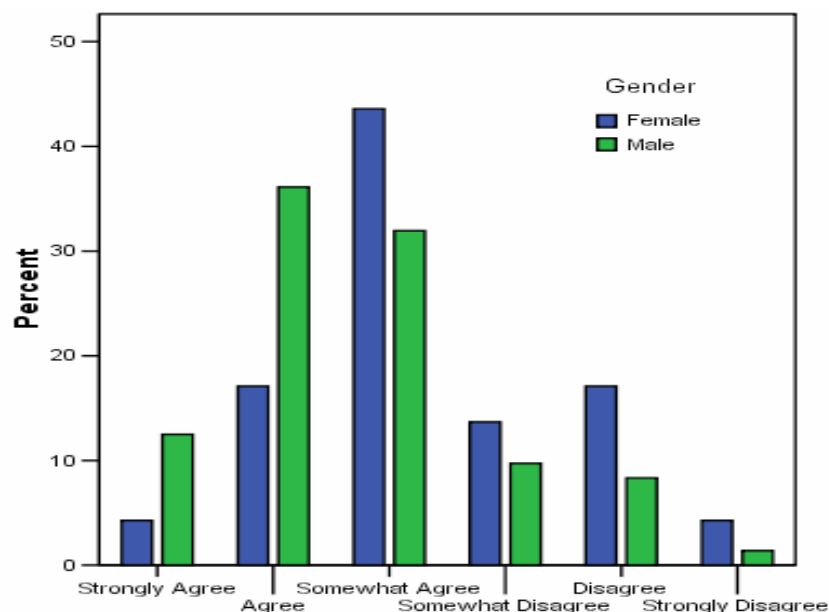


Figure 4.6 Ability to Generate Profit is Deciding Factor by Gender

A statistically significant difference in response based on gender (Figure 4.7) and current position of the pharmacist was also observed for *patient benefit obtained through pharmacy services should not be linked to the financial rewards received by the pharmacist*. Males were more likely to disagree to this statement when compared to female respondents ($p < 0.01$). Bonferroni analysis also revealed difference in responses between respondents who reported their current positions. Pharmacists (51.6%) were more likely to agree with the statement than Owners (23.6%) ($\chi^2 = 7.174$, $p < 0.01$).

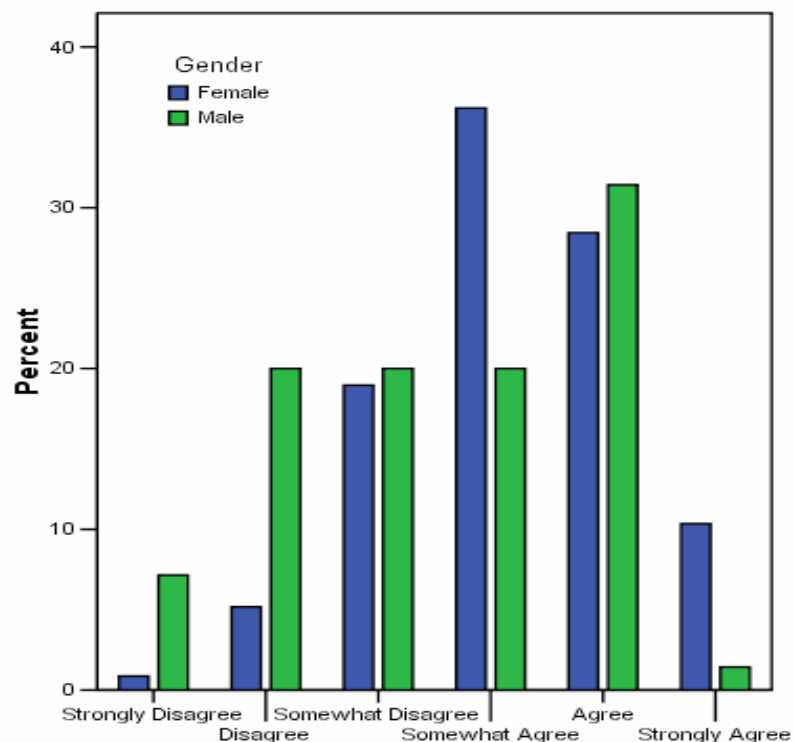


Figure 4.7 Benefits not Linked to Rewards by Gender

For the item *willingness to provide cognitive services free of charge for a moderate health gain of the patient* (Figure 4.8), males were more likely to strongly disagree with the statement ($p < 0.01$).

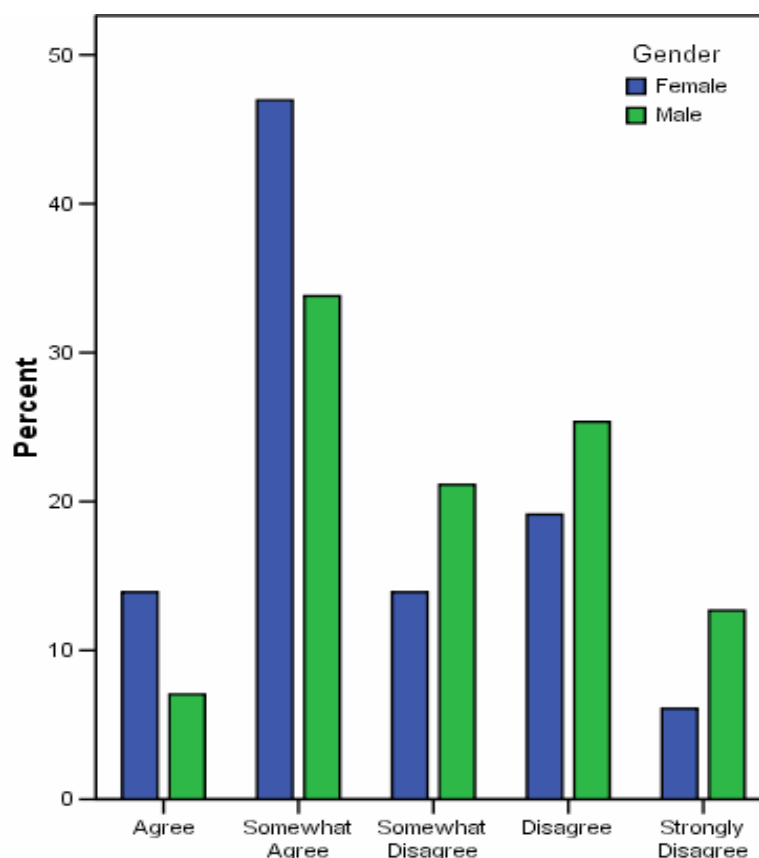


Figure 4.8 New Cognitive Service Free of Charge if Moderate Health Gain Expected by Gender

Respondents were asked if they would be willing *to provide a new cognitive service free of charge, if only a minor health gain was expected for the patient*. Bonferroni analysis revealed statistical significance based on the current position of the respondent. Pharmacy managers (24.6%) were more likely to agree with the statement than Owners (23.0%) ($\chi^2 = 7.276$, $p < 0.04$)

When asked whether *as an alternative to receiving an additional fee, they would provide a new cognitive service free of charge, if this was expected to increase customer loyalty to the pharmacy*, Bonferroni analysis revealed statistical significant results based on pharmacy type. Independent pharmacies

were more likely to agree the statement compared to Mass Merchandiser/Grocery store type of pharmacy ($\chi^2 = 9.760$, $p < 0.04$)

When asked if *they were more likely to make an extra effort for patients who express their appreciation*, statistically significant differences in responses were observed based on age of the responding pharmacist. Respondents in the age group of 21-30 years (17.8%) and 31-40 years (33.3%) were more likely to strongly agree/agree when compared to respondents between 41-50 years (25.3%) of age ($\chi^2 = 16.198$, $p < 0.01$).

4.3.4 Canada's Health Care Funding Policy

Section D of the questionnaire was formed to measure respondent support for the different options being considered to fund the health care system. The frequency distribution analysis of the eight questions is displayed in Table 4.5 (Pharmacists views on the Different Options to Fund Health Care).

When asked whether *health care should be funded by a single comprehensive public health insurance plan provided to all residents in each province and territory of Canada*, there was not much difference in responses between the various categories. 27.7 percent were agreeing or strongly agreeing, while 25.5 percent disagreed or strongly disagreed.

Respondents tended to disagree with the statement *for people in the workforce, health care benefits should be financed by employer and employee contributions to health insurance funds with governments insuring only the unemployed and the poor*. More than two of five respondents (43.2%) disagreed

or strongly disagreed while less than one in five (14.1%) agreed or strongly agreed.

When asked whether *people should be able to choose their health insurance plan from competing plans (either for-profit or not-for-profit)*, far fewer disagreed or strongly disagreed (15.6%). Most agreed or strongly agreed (32.3%) with the statement.

Respondents tended to disagree with the statement that the *range of benefits covered by publicly funded health plans should be limited to expensive treatments likely to cause financial hardship to the patient*. More than two of five respondents (40.1%) disagreed or strongly disagreed while less than one in five (11.4%) were agreeing or strongly agreeing.

There was substantial agreement with the statement *those willing to pay out-of-pocket to gain quicker access to health care should be allowed to do so* with 52.6 percent agreeing or strongly agreeing.

Respondents agreed that *people should be able to buy private medical insurance to pay for services currently funded by Medicare*. 45.9 percent were agreeing or strongly agreeing.

When asked if *the range of benefits to be covered by public health insurance should be expanded to include additional services (e.g. prescription drugs, home care, etc)*, most of the respondents agreed.

In response to the statement whether *the current method of relying on a combination of public and private insurance plans with a portion provided out-of-pocket by the patient the best way to fund the Canadian health care system*, most answered definitely or almost definitely (51.1%).

Table 4.5 Pharmacists views on the Different Options to Fund Health Care

Questions	Strongly Agree N (%)	Agree N (%)	Somewhat Agree N (%)	Somewhat Disagree N (%)	Disagree N (%)	Strongly Disagree N (%)	Total Responses N (%)	No opinion/ Non - Responses N (%)
1. Health care should be funded by a single comprehensive public health insurance plan provided to all residents in each province and territory of Canada.	17 (8.9)	36 (18.8)	46 (24.0)	32 (16.7)	30 (15.6)	19 (9.9)	180 (93.8)	12 (6.3)
2. For people in the workforce, health care benefits should be financed by employer and employee contributions to health insurance funds with governments insuring only the unemployed and the poor.	3 (1.6)	24 (12.5)	39 (20.3)	37 (19.3)	49 (25.5)	34 (17.7)	186 (96.9)	6 (3.1)
3. People ought to be able to choose their health insurance plan from competing plans (either for-profit or not-for-profit).	9 (4.7)	53 (27.6)	68 (35.4)	15 (7.8)	19 (9.9)	11 (5.7)	175 (91.1)	17 (8.9)
4. The range of benefits covered by publicly funded health plans should be limited to expensive treatments likely to cause financial hardship for the patient.	1 (0.5)	21 (10.9)	42 (21.9)	43 (22.4)	57 (29.7)	20 (10.4)	184 (95.8)	8 (4.2)
5. Those willing to pay out-of-pocket to gain quicker access to health care should be allowed to do so.	48 (25.0)	53 (27.6)	44 (22.9)	21 (10.9)	13 (6.8)	10 (5.2)	189 (98.4)	3 (1.6)
6. People should be able to buy private medical insurance to pay for services currently funded by Medicare.	22 (11.5)	66 (34.4)	56 (29.2)	15 (7.8)	15 (7.8)	8 (4.2)	182 (94.8)	10 (5.2)

Table 4.5 Pharmacists views on the Different Options to Fund Health Care (Continued)

Question	Strongly Agree N (%)	Agree N (%)	Somewhat Agree N (%)	Somewhat Disagree N (%)	Disagree N (%)	Strongly Disagree N (%)	Total Responses N (%)	No opinion/ Non – Responses N (%)
7. The range of benefits to be covered by public health insurance should be expanded to include additional services (e.g. Prescription drugs, home care, etc).	16 (8.3)	42 (21.9)	64 (33.3)	17 (8.9)	30 (15.6)	11 (5.7)	180 (93.8)	12 (6.3)
8. Is the current method of relying on a combination of public and private insurance plans with a portion provided out-of-pocket by the patient the best way to fund the Canadian health care system? (Indicate the answer that best applies).	12 (6.3)	86 (44.8)	54 (28.1)	20 (10.4)	8 (4.2)	1 (0.5)	181 (94.3)	11 (5.7)

Comparative analysis showed statistically significant differences in responses to these items based on gender. To the item *health care should be funded by a single comprehensive plan* difference in responses were found based on gender (Figure 4.9) and age of respondents. Males were more likely to disagree to this statement when compared to female respondents ($p < 0.01$). Respondents between 61-80 years (6.6%) of age were more likely to strongly disagree with this statement when compared to respondents between 41-50 years (25.3%) of age.

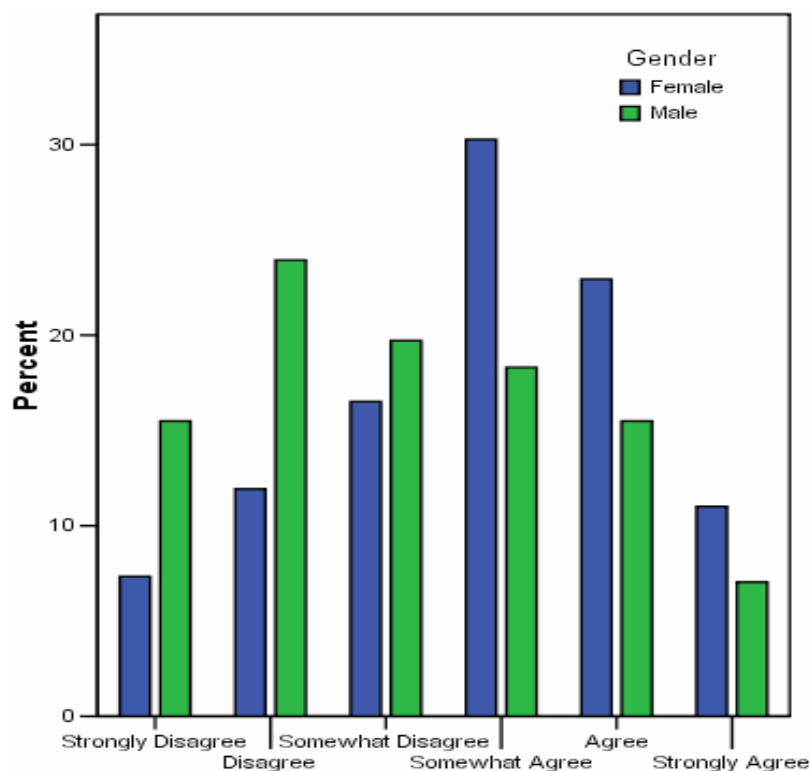


Figure 4.9 Health Care Funded by Single Comprehensive Plan by Gender

There was statistical significance between groups based on gender and the type of pharmacy of the respondent when asked if *people ought to be able to choose their health insurance plan from competing plans (either for-profit or not-*

for-profit) (Figure 4.10). Males strongly agreed to this statement when compared to female respondents ($p < 0.01$). Bonferroni analysis revealed significance in responses between Banner type and Mass Merchandiser/Grocery Store type of pharmacy. Respondents in the Banner type of pharmacy (13.2%) were more likely to agree with the statement than respondents from the Mass Merchandiser/ Grocery Store (27.6%) type of pharmacy ($\chi^2 = 14.084$, $p < 0.01$).

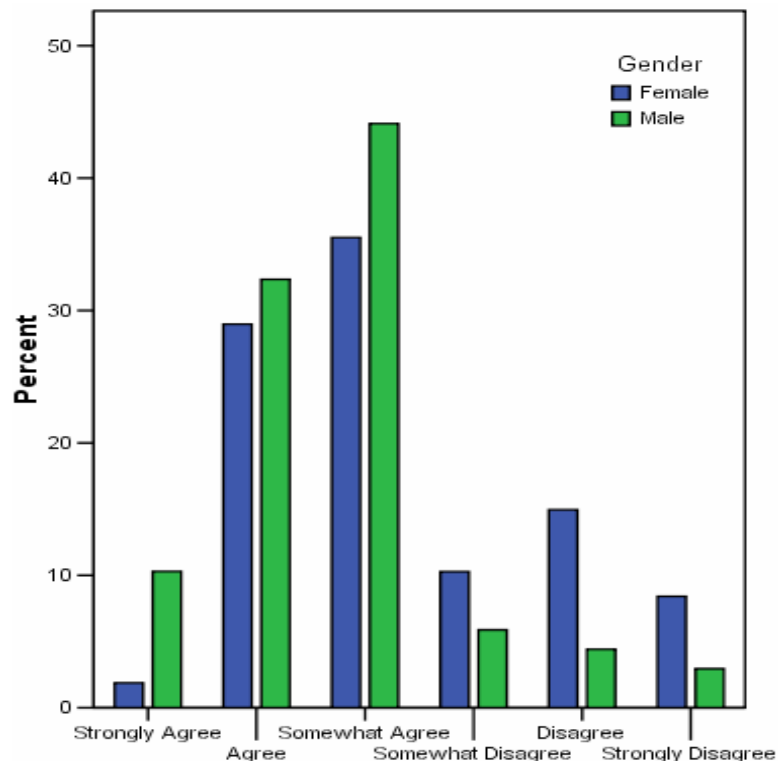


Figure 4.10 Able to Choose For-Profit or Not-for-Profit by Gender

When asked if *those willing to pay out-of-pocket to gain quicker access to health care should be allowed to do so*, there were statistically significant differences in responses based on gender (Figure 4.11) and type of pharmacy. Males strongly agreed to this statement when compared to female respondents ($p < 0.05$). Respondents from the Banner type (13.3%) were more likely to agree

with the statement than respondents from Mass Merchandiser/ Grocery store (28.7%) type of pharmacy ($\chi^2 = 16.164$, $p < 0.01$).

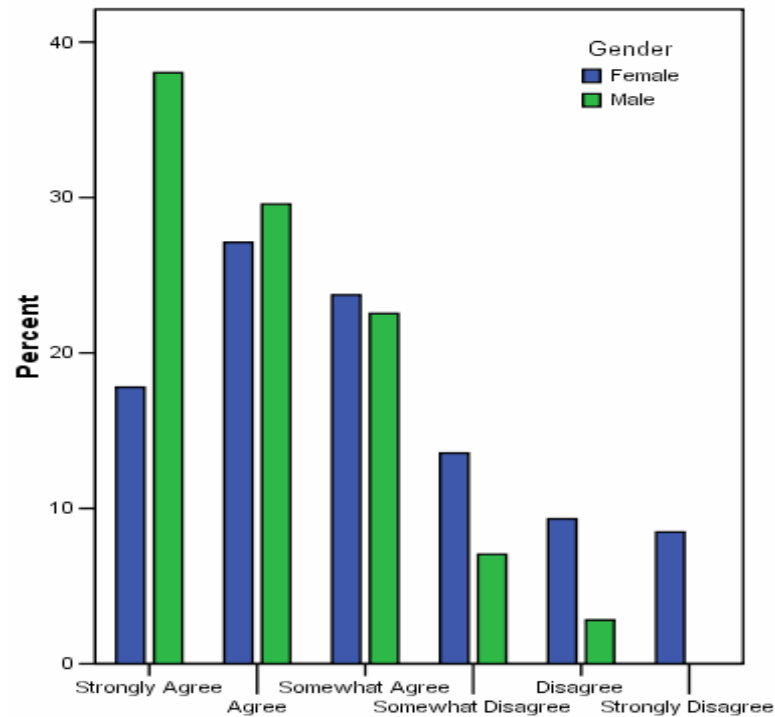


Figure 4.11 Allow Out-of-Pocket Payment for Quicker Access by Gender

For the item *people should be able to buy private medical insurance to pay for services currently funded by Medicare* (Figure 4.12), males more strongly agreed to this statement ($p < 0.03$).

To the item *the range of benefits to be covered by public health insurance should be expanded to include additional services (e.g. Prescription drugs, home care, etc)* (Figure 4.13), males were more likely to agree with the statement compared to female respondents ($p < 0.02$).

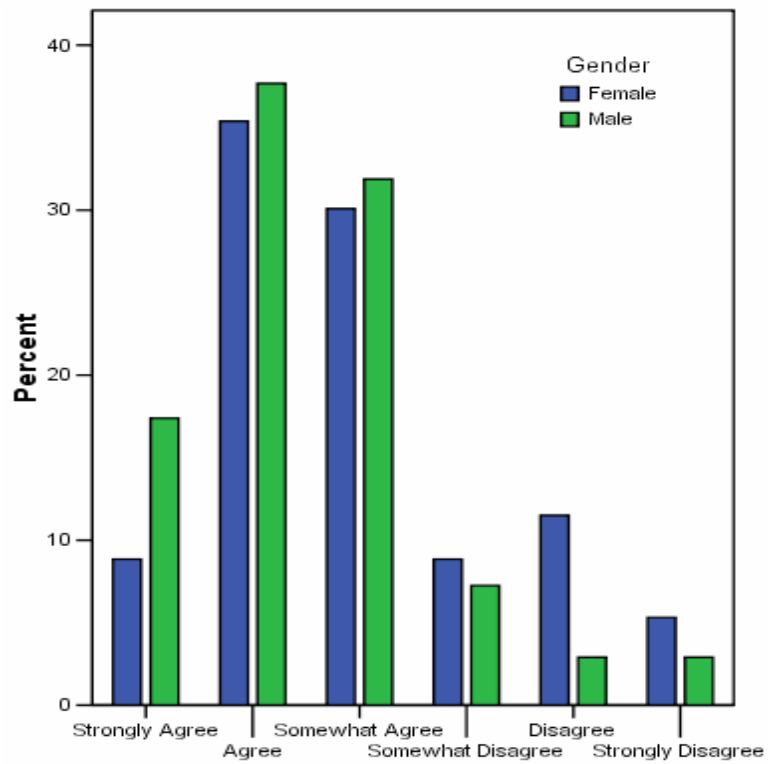


Figure 4.12 Able to Buy Private Medical Insurance by Gender

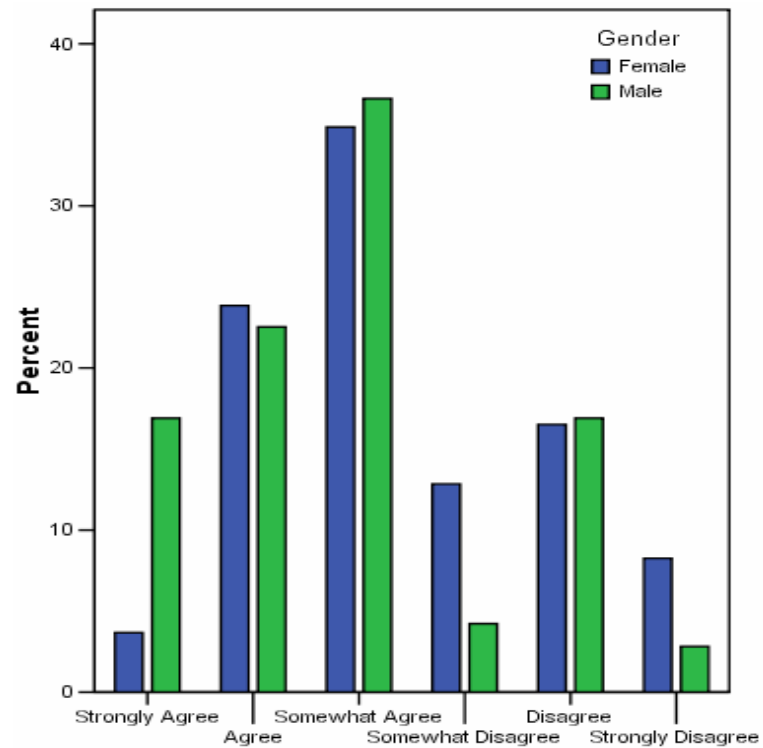


Figure 4.13 Coverage Expanded to Include Additional Services by Gender

4.4 Factor Analysis and Comparative Analysis of Reliable Scales

Factor analysis is performed to validate a scale. It is a data reduction technique which reduces a large number of variables into a smaller number of factors/components to form a construct [89]. In Table 4.6, 4.7, 4.10 and 4.12 the items group together under three components/factors based on their loading values. The loading values are the correlation coefficients between the variables (rows) and factors (columns). Loading values closer to 1.0 indicate a strong correlation and can be grouped together to form factors. A negative loading value indicates a negative relation of the variable to the factor.

4.4.1 Payment for Cognitive Services Constructs

The section on the payment for cognitive services (Section A) in the questionnaire produced two constructs (after performing varimax rotation of the component matrix) as displayed in Table 4.6. The first three items from the Table 4.6 formed the first construct. These items revealed the concept on the varying degrees of payment pharmacists sought for providing cognitive services to patients. The fourth and the fifth item from Table 4.6 formed the second construct. The above two items suggested the concept of whether or not pharmacists seek payment for providing cognitive services to patients. However the reliability statistics for Cronbach's Alpha based on standardized items was less than 0.600 for both constructs. Therefore, they were treated as individual items for analysis.

Table 4.6 Constructs for Payment for Cognitive Services

	Component*		
	1	2	3
Cognitive services should be offered free of charge	0.832		
Cognitive services should be offered for a pre-determined fee	0.716		
Pharmacists should be able to charge more when patients request more extensive counseling	0.635	-0.403	
OTC drug counseling should be provided free of charge		0.752	
Cognitive services should be offered based on the ability to pay		0.660	
Fee for cognitive services should be based on the cost of providing the service			0.968

* Rotated Component Matrix

Varimax loadings under 0.3 suppressed

4.4.2 Willingness to Adjust Time and Income Constructs

The section related to pharmacists' willingness to adjust their time and income to provide cognitive services to patients (Section B) in the questionnaire produced two constructs (after performing varimax rotation of the component matrix) as displayed in Table 4.7.

Three questions based on pharmacists' willingness to reduce income to improve patient outcomes formed a construct. Specifically, the pharmacists' willingness to reduce their income to increase outcomes such as improved patient access to prescription medicines, improved health and reduced drug costs. Cronbach's Alpha based on standardized items was 0.910, indicated good reliability. Individual item statistics is displayed in Table 4.8.

Analysis using one-way ANOVA resulted in no statistically significant difference between respondents ($p > 0.05$) based on gender, age, current position, year of first licensure, area, location and pharmacy type.

Table 4.7 Constructs for Pharmacists' Willingness to Adjust Time and Income for Improved Outcomes

	Component*	
	1	2
Willingness to work longer for no fee if it reduces drug costs for my patients	0.896	
Willingness to work longer for no fee if it improves health of my patients	0.875	
Willingness to work longer for no fee if it improves patient access to prescription drugs	0.870	
Willingness to provide one-day clinic free of charge if it improves health of my patients	0.460	
Willingness to reduce my income if it improves health of my patients		0.879
Willingness to reduce my income if it improves patient access to prescription medicines		0.875
Willingness to reduce my income if it reduces drug costs for my patients		0.844

* Rotated Component Matrix
Varimax loadings under 0.3 suppressed

Table 4.8 Pharmacists' Willingness to Reduce Income for Improved Outcomes Construct

Factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Willingness to reduce my income if it improves patient access to prescription medicines	9.54	4.477	0.820	0.672	0.864
Willingness to reduce my income if it improves health of my patients	9.91	3.683	0.833	0.694	0.861
Willingness to reduce my incomes if it reduces drug costs for my patients	9.56	4.561	0.810	0.656	0.873

Another construct consisted of three questions based on pharmacists' willingness to work longer for no fee to improve patient outcomes. Specifically,

improved patient access to prescription medicines, improved health and reduced drug costs. Cronbach's Alpha based on standardized items was 0.843, indicated good reliability. Individual item statistics is displayed in Table 4.9.

Analysis using one-way ANOVA resulted in no statistically significant difference between respondent groups ($p > 0.05$) based on gender, age, current position, year of first licensure, area, location and pharmacy type.

Table 4.9 Pharmacists' Willingness to Work Longer for no Fee to Improve Outcomes Construct

Factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Willingness to work longer for no fee if it improves patient access to prescription medicines	12.70	9.649	0.758	0.686	0.743
Willingness to work longer for no fee if it improves health of my patients	12.99	8.746	0.785	0.713	0.723
Willingness to work longer for no fee if it reduces drug costs for my patients	12.62	9.890	0.799	0.745	0.732

4.4.3 Value for Pharmacy Services Constructs

The section related to the value for pharmacy services (Section C) in the questionnaire produced three constructs (after performing varimax rotation of the component matrix) as displayed in Table 4.10.

The first five items from Table 4.10 (Component 1) formed a construct regarding the type of outcomes pharmacists sought in their patients in order to provide cognitive services free of charge. This suggested the type of exchange

relationship observed between pharmacist and patient. Cronbach's Alpha based on standardized items was 0.808 (Pharmacist-Patient Exchange Relationship Construct).

Items six, seven and eight from Table 4.10 (Component 2) formed another construct suggesting the type of non-monetary benefits pharmacists valued for providing cognitive services to patients. Items nine and ten from Table 4.10 (Component 3) formed the third construct suggesting the type of monetary benefits pharmacists sought for providing cognitive services to patients. Cronbach's Alpha based on standardized items was less than 0.500 for the above two constructs. They were considered as individual items since they provided weak reliability scales.

Table 4.10 Constructs for Outcomes and Rewards

	Component*		
	1	2	3
Willing to provide a new cognitive service free of charge if moderate health gain expected for patient	0.928		
Willing to provide a new cognitive service free of charge if major health gain expected for patient	0.867		
Willing to provide a new cognitive service free of charge if minor health gain expected for patient	0.812		
Increased customer loyalty in providing a new cognitive service free of charge as an alternative to receiving additional fee	0.645		
Ability to generate a profit is a critical deciding factor if considering adding a new cognitive service	0.448		
Ability to demonstrate a clear benefit is a critical deciding factor if considering adding a new cognitive service		0.730	
Preference of my patients is a critical deciding factor if considering adding a new cognitive service		0.697	
More likely to put extra efforts for patients who express their appreciation		0.556	
Benefits from services provided should not be linked to financial rewards			0.823
For high quality patient care, remuneration should be linked to amount of benefit received			0.737

* Rotated Component Matrix
 Varimax loadings under 0.3 suppressed

The Pharmacist-Patient Exchange Relationship Construct consisted of the following items: pharmacists' willingness to provide a new cognitive service free of charge if it involved a major, moderate and minor health gain to the patient and increase in customer loyalty as a deciding factor to provide a new cognitive service. The individual item statistics is displayed in Table 4.11.

Analysis using one-way ANOVA resulted in two factors having a statistically significant difference of $p < 0.05$. First, there was significant difference in responses based on gender with respect to the willingness to provide a new cognitive service free of charge if a moderate health gain is

expected for the patient ($p < 0.01$). Second, a statistically significant difference was observed in the willingness of respondents to provide a new cognitive service free of charge if a minor health gain was expected for the patient with regard to their current position. Specifically the difference in response was observed between Pharmacy manager and the Owner of a pharmacy ($F = 3.705$, $df = 2$, $p < 0.03$).

Table 4.11 Pharmacist-Patient Exchange Relationship Construct

Factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Increased customer loyalty in providing a new cognitive service free of charge as an alternative to receiving additional fee	15.25	14.591	0.478	0.337	0.804
Willing to provide a new cognitive service free of charge if major health gain expected for patient	14.86	12.143	0.743	0.715	0.722
Willing to provide a new cognitive service free of charge if moderate health gain expected for patient	14.44	11.821	0.835	0.812	0.694
Willing to provide a new cognitive service free of charge if only a minor health gain expected for patient	14.01	12.657	0.667	0.621	0.747

4.4.4 Canada's Health Care Policy Constructs

The section related to Canada's health care policy (Section D) in the questionnaire produced three constructs (after performing varimax rotation of the component matrix) as displayed in Table 4.12. The first four items from Table 4.12 formed a construct suggesting the different options for funding

Canada's health care system. Cronbach's Alpha based on standardized items for this construct (Options for Funding Construct) was 0.791.

Items five and six in Table 4.12 formed another construct suggesting options for who should be publicly and/or privately insured. Items seven and eight from Table 4.12 formed the last construct which suggested how the current public system can be modified or re-oriented with respect to allocation of funds while still maintaining a primarily public funded system. Cronbach's Alpha based on standardized items for these two constructs was less than 0.500. They were considered as individual items since they provided weak reliability scales.

The Options for Funding Construct consisted of four questions. Specifically, the ability to choose for-profit or not-for-profit plans, allow out-of-pocket payment to those willing to gain quicker access, choice of buying private medical insurance and the option to continue funding by a single comprehensive public health insurance plan. The individual item statistics is displayed in Table 4.13.

Analysis using one-way ANOVA revealed statistically significant differences in the four factors based on gender of the respondent ($p < 0.05$). Statistically significant differences were also observed in two factors (able to choose for-profit or not-for-profit plans ($F = 3.559$, $df = 4$, $p < 0.01$) and allow out-of-pocket payments ($F = 3.644$, $df = 4$, $p < 0.02$) for quicker access) based on the type of the pharmacy between Banner and Mass Merchandiser/Grocery Store.

Table 4.12 Constructs for Health Policy

	Component*		
	1	2	3
Able to buy private medical insurance for services currently funded by Medicare	0.812		
Allow Out-of-pocket payment for quicker access	0.788		
Able to choose for-profit or not-for-profit plans	0.665		
Health care should be funded by a single comprehensive public health plan	0.660		-0.511
Health care should be financed by employer and employee contributions		0.878	
Coverage limited to expensive treatments likely to cause financial hardship		0.800	
Coverage expanded to include additional services (e.g. Prescription drugs, home care, etc)			0.858
Is the current method of funding Canada's health care the best way?			0.515

* Rotated Component Matrix
 Varimax loadings under 0.3 suppressed

Table 4.13 Options for Funding Construct

Factors	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Able to choose for-profit or not-for-profit plans	8.89	11.758	0.574	0.381	0.744
Allow Out-of-pocket payment for quicker access	9.42	10.844	0.604	0.371	0.729
Able to buy private medical insurance for services currently funded by Medicare	9.25	11.025	0.691	0.483	0.689
Health care should be funded by a single public health plan	8.40	11.080	0.524	0.312	0.774

4.5 Correlation

Based on the different constructs identified through factor analysis, correlation tests were performed to study the relationship between the constructs.

The distribution of responses was non-linear for Pharmacists' Willingness to Reduce Income for Improved Outcomes Construct (Figure 4.14). It was necessary to compute the non-parametric Spearman's correlation coefficient as it violated the normal distribution assumption required for parametric analysis.

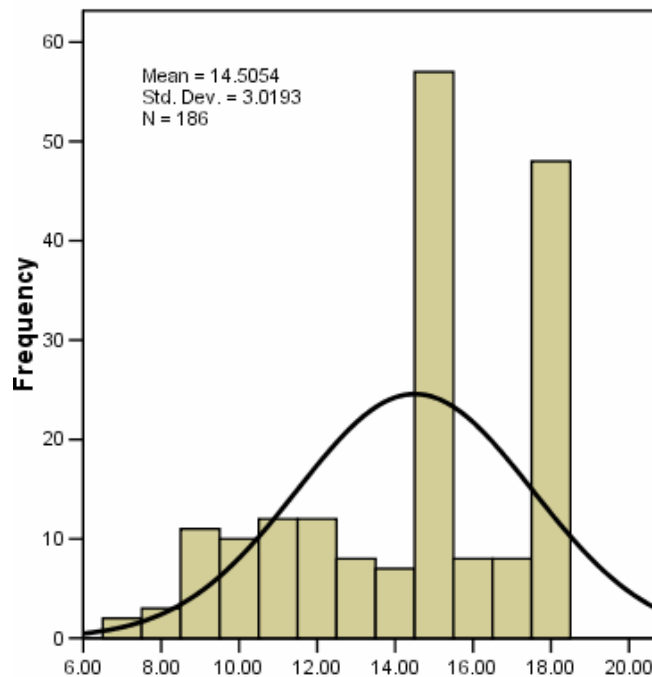


Figure 4.14 Pharmacists' Willingness to Reduce Income for Improved Outcomes Construct

The distribution of responses was non-linear for Pharmacists' Willingness to Work Longer for no fee to Improve Outcomes Construct (Figure 4.15). Spearman's correlation coefficient was determined to test the relationship between constructs.

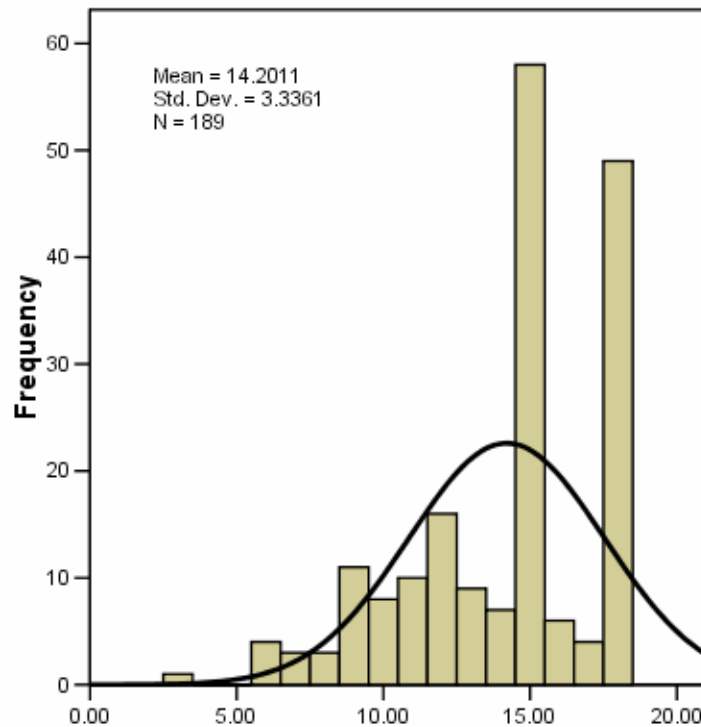


Figure 4.15 Pharmacists' Willingness to Work Longer for no Fee to Improve Outcomes Construct

The third construct was the exchange relationship involved between a pharmacist and patient when providing services. The distribution of responses was determined for Pharmacist-Patient Exchange Relationship Construct, (Figure 4.16). The Pearson's and Spearman's correlation coefficient was determined.

The distribution of responses was determined for the Options for Funding Construct (Figure 4.17). The Pearson's and Spearman's correlation coefficient were computed to test the relationship between constructs.

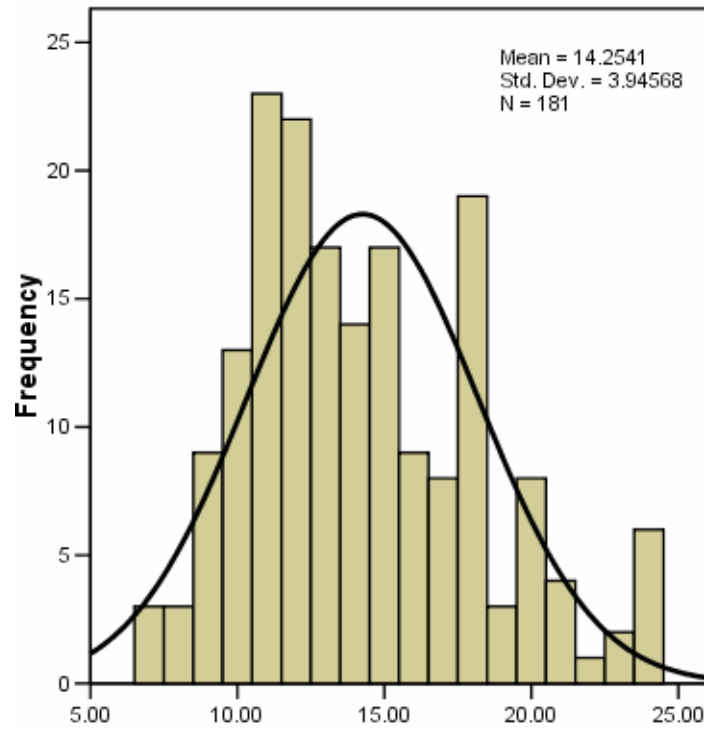


Figure 4.16 Pharmacist-Patient Exchange Relationship Construct

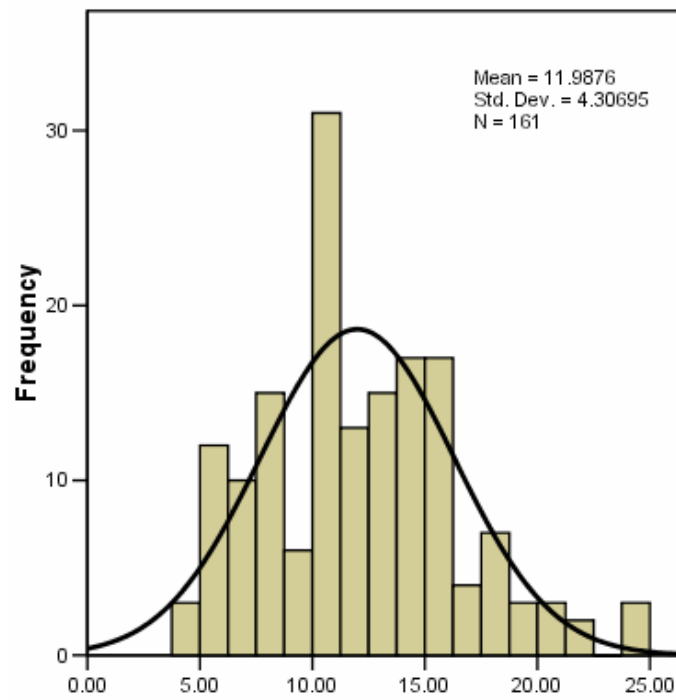


Figure 4.17 Options for Funding Construct

The correlation coefficient's for the different constructs are displayed in Table 4.14 and Table 4.15.

There was no significant correlation between the Options for Funding Construct, Pharmacists' Willingness to Reduce Income for Improved Outcomes Construct, Pharmacists' Willingness to Work Longer for no Fee to Improve Outcomes Construct and the Pharmacist-Patient Exchange Relationship Construct.

Table 4.14 Pearson Correlation Matrix for Different Constructs

		Willingness to Reduce Income Construct	Willingness to Adjust Time Construct	Pharmacist-Patient Exchange Relationship Construct	Options for Funding Construct
Willingness to Reduce Income Construct	Pearson Correlation Sig. (2-tailed) N	1.000 - 186	0.582(**) 0.000 186	0.371(**) 0.000 179	0.010 0.902 158
Willingness to Adjust Time Construct	Pearson Correlation Sig. (2-tailed) N	0.582(**) 0.000 186	1.000 - 189	0.448(**) 0.000 180	-0.015 0.854 159
Pharmacist-Patient Exchange Relationship Construct	Pearson Correlation Sig. (2-tailed) N	0.371(**) 0.000 179	0.448(**) 0.000 180	1.000 - 181	-0.131 0.102 156
Options for Funding Construct	Pearson Correlation Sig. (2-tailed) N	0.010 0.902 158	-0.015 0.854 159	-0.131 0.102 156	1.000 - 161

** Correlation is significant at the 0.01 level (2-tailed).

Table 4.15 Spearman's Correlation Matrix for Different Constructs

		Willingness to Reduce Income Construct	Willingness to Adjust Time Construct	Pharmacist-Patient Exchange Relationship Construct	Options for Funding Construct
Willingness to Reduce Income Construct	Correlation Coefficient Sig. (2-tailed) N	1.000 - 186	0.678(**) 0.000 186	0.343(**) 0.000 179	-0.031 0.697 158
Willingness to Adjust Time Construct	Correlation Coefficient Sig. (2-tailed) N	0.678(**) 0.000 186	1.000 - 189	0.442(**) 0.000 180	-0.103 0.198 159
Pharmacist-Patient Exchange Relationship Construct	Correlation Coefficient Sig. (2-tailed) N	0.343(**) 0.000 179	0.442(**) 0.000 180	1.000 - 181	-0.166(*) 0.039 156
Options for Funding Construct	Correlation Coefficient Sig. (2-tailed) N	-0.031 0.697 158	-0.103 0.198 159	-0.166(*) 0.039 156	1.000 - 161

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

CHAPTER 5

DISCUSSION

The study sought to answer three research questions:

1. To what extent do community pharmacists view health care services as a commodity or as a public right?
2. What are the attitudes of community pharmacists towards the funding and organization of the health care system?
3. What is the relationship between support for different health reform strategies and the community pharmacist's perception of health care as either a commodity or a public right?

The study measured the attitudes of community pharmacists towards health care as either a commodity or as a public right. It also measured their support for different options of funding the health care system. The study then attempted to see whether a relationship existed between pharmacists' views of health care as a commodity or public right and their support for public or private funding options of health care?

5.1 Research Question # 1

To what extent do community pharmacists view health care services as a commodity or as a public right?

Community pharmacists are beginning to provide cognitive services more frequently by following the pharmaceutical care practice model [68, 91]. A survey of managers and owners of community pharmacies in 2003 showed a

wide range in the number and type of cognitive services offered in each pharmacy [92]. For example, 78% offered an in-store blood pressure monitoring device while only 23% offered out-of-store educational seminars and programs and 15% offered pharmacy care plans with documentation.

The community pharmacists surveyed indicate that they would prefer to be paid for the cognitive pharmacy services they provide. This did not include OTC drug counseling which they would continue to provide for free as a part of their professional responsibility. However for extensive medication counseling for complex diseases, they expect to charge more than the basic professional fee. In addition to some public and private insurance plans, out-of-pocket payments from patients often offer reimbursement for these services. However, programs providing payment for cognitive services are still not very common [75, 93].

Pharmacists were more likely to accept (43.8%) a pre-determined fee for their services when compared to providing services free of charge. They prefer that the compensation be tied to the cost of services provided and not to the amount of benefit the patient receives. This indicates that pharmacists want to be financially compensated for the amount of work and effort they put into providing cognitive services irrespective of the patient health outcome. However, historical factors seem to prevent some community pharmacists from billing for services, such as the traditional practice of counseling at no cost [91]. A research study was conducted among Quebec pharmacists to identify factors that influenced their billing behaviour [75]. Variations in billing behavior based on factors such as age and workload was observed. Pharmacists younger in age or

with less than six years of practice experience showed more confidence in their role and were associated with increased billing for services than older pharmacists.

It has been shown that pharmacists expect to be financially compensated for providing cognitive services [73, 74, 76]. The above results further support the literature in finding that financial motivation for providing cognitive services is much stronger than the idea of providing services free of charge.

The results also indicate that the financial motivation of pharmacists is independent of the patients' ability to pay for the service i.e. pharmacists indicate that they will not differentiate in providing services to a patient that can pay and a patient that cannot pay. This is consistent with the founding principles of the Canadian health care system of provision of health care services based on need and not on the individual's ability to pay.

Although pharmacists are unwilling to differentiate provision of cognitive services based on patient's ability to pay, they still seek financial compensation for such services. This attitude of pharmacists is a little confusing and appears contrary to the founding principles of Canadian health care. This deviation may be due to two reasons. First, pharmacists seem to prefer that the health care system (government, private insurance plans) take care of compensation in cases where the patients are unable to pay. Second, pharmacists are unable to draw a clear line to distinguish how much and what type of cognitive services they are willing to provide to patients with/without financial compensation. The Ontario Pharmacists Association has created a suggested fee guide for pharmacy services which describes the cognitive services that could be offered

by pharmacies and a suggested fee structure [68]. A similar guide does not exist for the province of Saskatchewan.

There was difference in responses between male and female respondents on questions related to financial compensation for cognitive services. Males were more likely to agree (58%) that a pre-determined fee should be charged to patients that are willing to pay. In the same vein, a majority of males (74%) also disagree to providing cognitive services free of charge. In addition, males also were more likely to agree (83%) that they should be able to charge more for extensive counseling for complex diseases.

These findings are interesting as they seem to suggest female pharmacists attach a lesser value to financial compensation than their male counterparts. As a result, this might affect the price of cognitive services offered in community pharmacies across Saskatchewan based on the gender of those making this decision. With an increasing number of female pharmacy graduates compared to male graduates, the above differences may affect attitudes and perceptions of future pharmacists towards reimbursement for cognitive services. However, more research and data are necessary before any conclusion on gender differences can be drawn.

With increasing responsibilities, pharmacists often find it difficult to provide improved quality of services to their patients [63, 71, 72]. Pharmacists prefer to focus more time on counseling and drug use management programs, which are a part of cognitive pharmacy services, during their day-to-day activities [70, 94]. However they identify excessive workload and/or lack of time and staff as a barrier to providing cognitive services [68, 72, 73, 75]. They also

identify role ambiguity, role conflict and role overload as impairing their ability to provide improved quality of services [70, 72].

Given the above information, this study quantified the extent of time and income adjustments pharmacists were willing to make to improving patient outcomes. The results suggest the respondents were less likely to agree to reduce their income or work longer hours with no additional income on a routine basis to improve patient outcomes. However, they were willing to work free of charge for short term commitments such as one-day clinics (30.8%).

There may be a disconnection between the pharmacists' stated preference to focus more time on providing improved quality services and their unwillingness to make time and income adjustments. This may imply that they are willing to provide cognitive services only during regular business hours and/or if they are paid extra for these services.

The literature establishes that obtaining rewards for providing cognitive services are motivational factors to pharmacists [73, 74, 76]. In this study, we measured the level of importance pharmacists attached to each of the following types of rewards: professional, personal and monetary.

The results indicate that pharmacists expected financial gain if they offered cognitive services to patients. They also seem to agree that the financial benefit should not be linked to the amount of benefit a patient receives. However they are more likely to provide services free of charge if the health benefit to the patient was major. Pharmacists also seem to place some importance to "feel good factors" like customer loyalty and patient appreciation of their work. However it is unclear if these are significant motivating factors for them to

provide cognitive services i.e. will they provide services at little or no cost if the only benefit they derive is patient appreciation?

An interesting difference in responses based on gender suggests males were more likely to want the addition of cognitive services to generate a profit. This may be due to the fact the majority of male respondents in the study were pharmacy owners or managers (67%) for whom a profit motive may be more significant.

There was no statistical difference in response between male and female pharmacists who were willing to provide new cognitive service free of charge if it resulted in major health gain for the patient. However a slightly larger number of female respondents (60%) were more likely to provide cognitive services free of charge even if the health benefit to patients was only moderate. This may suggest that female pharmacists value patient benefit as a significant personal reward to their contribution.

More independent pharmacists (40%) when compared to those in Mass Merchandiser/Grocery store type of pharmacies (26%) were willing to forego monetary benefit and provide new cognitive services free of charge if they thought this would increase customer loyalty. This may be because independent pharmacies mostly exist in rural settings where they play an important role in the local community's health care needs. Pharmacist-patient relationships at such pharmacies may be stronger than at grocery store type pharmacies in urban settings.

5.2 Research Question # 2

What are the attitudes of community pharmacists towards the funding and organization of the health care system?

The literature states that there is an ongoing debate on how to best fund the Canadian health care system [12, 34, 35]. Various options to fund and/or reorganize the current system are being considered. These include providing more public funds, more private funds in the form of out-of-pocket payments such as co-payments, introduction of two-tier health care and reorganization of the public system in terms of what services need to be covered [7, 13, 35, 50].

This study attempted to understand pharmacists' opinion about the current health care system and to measure their support for the different funding options being debated.

Respondents did not seem to have strong agreement or disagreement on whether health care should be funded by a single comprehensive public health insurance plan. They agreed (51.1%) that "the current funding method of relying on a combination of public and private insurance plans with a portion provided out-of-pocket by the patient" is almost definitely the best way to fund health care. However, they state that there are major problems with the current system that must be fixed.

Their support for the public and private funding mix is shown by their responses discussed below. Respondents agree that patients must be able to choose from competing for-profit and not-for-profit health plans (32.3%). Also, they agree to allow patients to pay out-of-pocket to gain quicker access to health care (52.6%). Further, they agree to allow patients to buy private medical

insurance to pay for services currently funded by Medicare (45.9%). However, services funded by Medicare cannot be covered through private insurance at this time. This is primarily because all Canadians pay into Medicare through taxation. Choosing the same service through private insurance will imply double payment.

With regard to public funding options, they support expanding the range of benefits covered by public health insurance by including additional services. They also do not want to limit coverage solely to expensive treatments likely to cause financial hardship to patients.

These results are not surprising based on previous studies. A Health Care in Canada survey in 2006 found that a majority of Canadian pharmacists were not completely satisfied with the public health care system [95]. They cite that purchase of private insurance plans would lead to shorter wait times (85%), improve access to health care for everyone (69%) and lead to improved quality of health care services (76%).

There were differences in responses based on gender. Males were more likely to disagree (41%) to a single comprehensive health insurance plan option when compared to females. They are more likely to support private funding options such as allowing people to pay out-of-pocket to gain quicker access to health care (66%), allowing private medical insurance (54%) and supporting the availability of competing for-profit and not-for-profit plans (44%). In light of the ongoing funding debate, the acceptance and satisfaction of pharmacists with the organization, funding and delivery of a future health care system may differ based on gender.

5.3 Research Question # 3

What is the relationship between support for different health reform strategies and the community pharmacists perception of health care as either a commodity or a public right?

The study was aimed at developing a scale to measure pharmacists' attitudes towards health care as a commodity or as a public right. This included measuring pharmacists' opinion at a personal level about the nature of services they provided directly to patients and the expected rewards. The study also measured their opinion about the funding and organization of the current health care system.

Based on the results of the above research questions the study attempted to find if any relationship existed between pharmacists' support for different health reform strategies and their attitudes towards health care as a commodity or public right. There is no previous research that could provide baseline data to study if any relationship exists. In this study, statistical analysis showed no significant relationship.

Pharmacists appear to prefer financial compensation for providing additional cognitive services. They were not willing to work extra hours free of charge or make any income adjustments on a regular basis. The results also suggest that they did not like the idea of providing additional services only to patients that are willing to pay extra. On the broader question of their support for the different health care funding options, the results suggest that pharmacists did not support one insurance plan, public or private, over the other. They agree that the current system needs reform and seem to prefer a mix of both public

and private insurance plans that provided the best options for improved health care.

Pharmacists do not seem to view their services purely as a commodity or purely as a public right. Combining this result with their lack of strong preference for one funding system (public or private) over another it may be difficult to infer any significant relationship between the two measured scales.

Further research and a more elaborate scale may provide additional insight into the existence of any relationship.

5.4 Study Limitations

This study was conducted in the province of Saskatchewan and may not be applicable to other jurisdictions. Also, since the scope of the study was small in nature and was aimed at developing a research instrument to measure attitudes of community pharmacists, the results cannot be generalized to the entire population of pharmacists. A larger study sample would better enable generalization of the results.

The original list of community pharmacists obtained from the Saskatchewan Board of Pharmacists did not provide information about the gender of the pharmacists. Hence it was not possible to know whether or not there was an even distribution of respondents based on gender before conducting the study. The percentage of female respondents (62.5%) was significantly higher than male respondents (37.5%). This may have affected the study results.

Although the questionnaire was tested for clarity in content and choice of words, there may have been unidentified or problematic areas which may have affected the study results. It is often difficult to capture attitude and perception based responses on a number scale. It may be possible that usage of a six-point Likert scale, which was presumed to allow for wider choice and simplicity of responses, in this study may not have accurately captured pharmacists' attitudes.

Due to a small number of no-opinion type responses in this study, these were combined with non-responses while doing the data analysis. This may be another limitation to the study.

There is no previous research available that measured pharmacists' perceptions of health care as a commodity or as a public right. Therefore the scale developed through this study can be used as a baseline measure and it cannot be compared to any previous studies.

5.5 Conclusions

Pharmacists expect to be paid for providing cognitive services to patients. However, they do not want to restrict the provision of cognitive services only to patients that have the ability to pay. This may suggest that although they attach value to the public right aspect of health care delivery, personal monetary benefit seems important to them. Pharmacists seem unwilling to make time and income adjustments on a regular basis to improve patient outcomes. An interesting question is whether these attitudes are influenced by excessive workload, understaffing and job stress that community pharmacists face. A profit

motive seems to be a significant factor influencing their offering of new cognitive services. Although they are willing to tailor provision of new cognitive services to patient preferences, they prefer that rewards for these services not be linked to the amount of patient benefit. They place some importance to non-monetary rewards such as customer loyalty which could in turn benefit them professionally. Overall they seem to want financial compensation without unduly burdening patients or limiting their access to health care services. This stance may suggest their support for health care as a commodity or as a public right. However, it is hard to justify where exactly they stand on the commodity – public right continuum.

With regard to their support of the different funding options, pharmacists favour the current health care system with its mix of public and some private funding. However, they prefer to see more choice in its organization and delivery such as introducing competing for-profit insurance plans, allowing quicker access to patients willing to pay out-of-pocket and expansion in the range of services covered. This suggests that they are not biased towards any one funding model and would like to incorporate all options that could potentially improve the system by providing better coverage and faster access to patients.

Based on these results, no relationship could be established between pharmacists' support for different health care funding options and their orientation towards health care as a commodity or as a public right.

5.6 Future Research

This study focused on measuring perceptions among community pharmacists in the province of Saskatchewan. The work environment and responsibilities of hospital pharmacists differs from that of community pharmacists. A similar study can be conducted on hospital pharmacists in Saskatchewan to compare data with community pharmacists. This study could also be conducted on a large sample in a nation-wide survey which may identify differences in response based on geography, rural versus urban settings, provincial insurance coverage, work environment etc. In addition, the same study could be conducted again after a certain period of time on a similar audience. This will strengthen the scale and also test its reliability. Changes to the overall health care system, funding model, changes in the work environment of community pharmacists, etc. may influence the type of responses when re-tested.

From this study it is clear that community pharmacists expect to be compensated for their services. A scale can be developed in order to quantify exactly how much payment pharmacists seek for what type of cognitive services. This could provide more insight on where they stand on the commodity-public right continuum.

Literature states that pharmacists are over-worked, under-staffed and stressed in their job. These inefficiencies in the system may have skewed their response. It would be interesting to study how pharmacists' responses may change if improvements are made to their work environment.

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APPENDIX A

Original Questionnaire



Pharmacists' Perceptions of Health Care and Pharmacy Services: Commodity or Public Good?

Swathi Krishnaprasad

College of Pharmacy and Nutrition
University of Saskatchewan
Saskatoon, SK

For the purposes of this study, cognitive pharmacy services are defined as those services provided by a pharmacist to, or for, a patient or health care professional that go beyond regular professional activities such as dispensing and routine medication counselling.

A- Paying for Cognitive Services

To what extent do you agree or disagree to the following statements.

1. Cognitive pharmacy services shown to benefit patients should be offered for a **pre-determined fee** (provided only to those patients willing to pay).

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

2. Cognitive pharmacy services shown to benefit patients should be offered based on the **ability to pay** (those able to pay more would subsidize those less able to pay).

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

3. Cognitive pharmacy services shown to benefit patients should be offered to all patients **free of charge** (included under services covered by existing professional/dispensing fees).

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

4. If a fee is to be charged for a cognitive service, it should be **based on the cost of providing the service** rather than the amount of benefit a patient receives.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

5. Pharmacists should continue to provide **OTC drug counselling free of charge**.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

6. Medication counselling is considered to be part of the dispensing process and is covered by the professional fee. However, when patients request more **extensive counselling due to complex diseases or medication regimes**, pharmacists should be able to charge more.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

In completing the following statement, assume any time taken away from dispensing to spend with patients would result in a comparable drop in income (For example: In a 40 hour work week spending 4 more hours providing cognitive services would cause your income to decrease by 10%).

Based on a time-income trade off, I would be willing to reduce my income by _____% to have more time with my patients.

B – Adjusting Time and Income to Improve Patient Outcomes

Questions in this section relate to your willingness to give up time or income as a way to contribute to improved outcomes for your patients.

1. I would be willing to reduce my income if I thought this would **improve patient access** to prescription medicines.

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion
[]	[]	[]	[]	[]	[]	[]

2. I would be willing to reduce my income if I thought this would **improve the health** of my patients.

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion
[]	[]	[]	[]	[]	[]	[]

3. I would be willing to reduce my income if I thought this would **reduce drug costs** for my patients.

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion
[]	[]	[]	[]	[]	[]	[]

4. I would be willing to work longer hours providing a cognitive service for no additional income if I thought this would **improve patient access** to prescription medicines.

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion
[]	[]	[]	[]	[]	[]	[]

5. I would be willing to work longer hours providing a cognitive service for no additional income if I thought this would **improve the health** of my patients.

Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion
[]	[]	[]	[]	[]	[]	[]

6. I would be willing to work longer hours providing a cognitive service for no additional income if I thought this would **reduce drug costs** for my patients.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

7. I would be willing to provide a one-day clinic such as cholesterol screening free of charge for my patients if it was likely to **improve the health of my patients**.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

C – Outcomes and Rewards

Every pharmacist fulfills obligations: to society; to patients; and to their profession, in their own unique way as an independent practitioner. Each pharmacist also receives professional, personal and financial rewards. Your responses to the following statements will allow you to assess the contributions you make and the rewards you expect to receive as a result.

1. If I were considering adding a new cognitive service or program, the ability to **generate a profit** for the pharmacy would be a critical deciding factor.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

2. If I were considering adding a new cognitive service or program, the **preferences of my patients** would be a critical deciding factor.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

3. If I were considering adding a new cognitive service or program, the ability to **demonstrate a clear benefit** to patients would be a critical deciding factor.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

4. The benefits a patient receives from the services I provide **should not be linked to** the financial rewards I receive as a pharmacist.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

5. I would be willing to provide a new cognitive service free of charge, if a **major health gain** was expected for the patient.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

6. I would be willing to provide a new cognitive service free of charge, if a **moderate health gain** was expected for the patient.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

7. I would be willing to provide a new cognitive service free of charge, if **only a minor health gain** was expected for the patient.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

8. As an alternative to receiving an additional fee, I would provide a new cognitive service free of charge, if this was expected to **increase customer loyalty** to the pharmacy.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

9. To ensure high quality patient care, the remuneration a pharmacist receives **should be linked** to the amount of benefit a patient receives.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

10. I am more likely to make an extra effort for patients who **express their appreciation**.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

D – Health Policy

Currently, there is a great deal of debate on the sustainability of health care in Canada and the emergence of private insurance. We are interested in your views on this national health policy issue.

1. Health care should be funded by a **single comprehensive** public health insurance plan provided to all residents in each province and territory of Canada.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

2. For people in the workforce, health care benefits should be financed by **employer and employee contributions** to health insurance funds with governments insuring only the unemployed and the poor.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

3. People ought to be able to choose their health insurance plan from **competing plans (either for-profit or not-for-profit)**.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

4. The range of benefits covered by publicly funded health plans should be limited to expensive treatments likely to cause **financial hardship** for the patient.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

5. Those willing to pay **out-of-pocket** to gain quicker access to health care should be allowed to do so.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

6. People should be able to buy **private medical insurance** to pay for services currently funded by Medicare.

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

7. The range of benefits to be covered by public health insurance should be expanded to include **additional services** (e.g. Prescription drugs, home care etc).

Strongly Agree []	Agree []	Somewhat Agree []	Somewhat Disagree []	Disagree []	Strongly Disagree []	No opinion []
--------------------------	--------------	--------------------------	-----------------------------	-----------------	-----------------------------	-------------------

8. Is the current method of relying on a **combination of public and private insurance plans with a portion provided out-of-pocket** by the patient the best way to fund the Canadian health care system? (Indicate the answer that best applies).

- [] Definitely, the current system functions well, although there may be some minor problems
- [] Almost definitely, however, there are major problems in the current system that must be fixed
- [] Probably, however systems used in other countries might be considered
- [] Maybe the problems in the current system are so great that other systems might be better
- [] Probably not, other systems are likely to be superior to the current system
- [] Definitely not, other systems are superior to the current system
- [] No opinion

E – The Pharmacy

Location and Type of Pharmacy (Check all that apply)

Area:	<input type="checkbox"/> Commercial	<input type="checkbox"/> Residential	<input type="checkbox"/> Mixed
Location:	<input type="checkbox"/> Stand Alone Building <input type="checkbox"/> Medical Building/Complex	<input type="checkbox"/> Strip Mall <input type="checkbox"/> Other: _____	<input type="checkbox"/> Enclosed Mall
Type of Pharmacy:	<input type="checkbox"/> Independent <input type="checkbox"/> Franchise <input type="checkbox"/> Mass Merchandiser	<input type="checkbox"/> Banner <input type="checkbox"/> Grocery Store <input type="checkbox"/> Other: _____	<input type="checkbox"/> Chain <input type="checkbox"/> Department Store

F – The Pharmacist Completing the Questionnaire

Gender: Female () Male () Age (years): _____

Current position (Job Title): _____

First year of licensure as a Pharmacist: _____

How many years in your current position? _____

G – Comments (Please feel free to attach additional pages):

Thank you for participating in this study.

APPENDIX B

Pre-notice Letter

Date

ID Number

«Title» «UsualName» «Pharmacist_Last_Name»

«Pharmacy_Name»

«Street»

«City», «Province» «PostalCode»

Re: Pharmacists and their Perceptions towards Health Care

Dear «Title» «Pharmacist_Last_Name»:

Within the next week you will receive in the mail a request to complete a brief questionnaire for an important research project being conducted at the College of Pharmacy & Nutrition at the University of Saskatchewan.

The questionnaire we are asking you to complete concerns your perceptions of the health care system in Canada as a commodity or a public good. There will also be a brief section on your views regarding the type of support for funding the present health care system.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306-966-6377) or phone (306-966-6363). Completing and returning this survey constitutes consent for the researchers to use the data for the purposes of conducting the study as approved by the University of Saskatchewan Behavioural Research Ethics Board on August 18, 2005. Should you have any questions regarding your rights as a participant or any other issues in this study you may call the Office of Research Services at the University of Saskatchewan (306-966-2084). Out of town participants may call collect.

Thank you for your time and consideration. It's only through people like you who are willing to help in our research that we are able to gain a greater appreciation for how these issues are perceived by pharmacists, as well as how they affect the framing of health care policies.

Sincerely,

Swathi Krishnaprasad, BScPharm
Graduate Student

Roy Dobson, BScPharm, MBA, PhD
Assistant Professor of Pharmacy

APPENDIX C

Initial Mailing Cover Letter

Date

ID Number

Pharmacy Name
Pharmacist Name
Mailing Address
City/Town Postal Code

Re: Pharmacists and their Perceptions towards Health Care

Dear Pharmacist Name:

The purpose of this study is to gain a better understanding of pharmacists' perceptions on health care as a commodity or a public good. The survey includes questions on: the payment for cognitive services, adjusting time and income to improve patient outcomes, the type of outcomes and rewards sought by pharmacists, and support for different approaches to funding the Canadian health care system. The questionnaire should take approximately 15 minutes to complete.

Your participation is important. However, it is completely voluntary and you do not have to complete the questionnaire if you do not wish to; you may also refuse to answer individual questions. You may withdraw from the study at any time and your data will be destroyed if you so choose. The code number on the questionnaire is designed to give the investigators the ability to track questionnaires while keeping your identity strictly confidential. Only the principal investigator (Roy Dobson) and co-investigator (Swathi Krishnaprasad) will have access to the data arising from this study. All information will be stored in secure facilities at the University of Saskatchewan. Results will be aggregated to ensure that the identities of individual respondents are safeguarded. Results will be reported in the student-researcher's Thesis, refereed periodicals and at conferences and meetings associated with pharmacists and health care organization.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306-966-6377) or phone (306-966-6363). Completing and returning this survey constitutes consent for the researchers to use the data for the purposes of conducting the study as approved by the University of Saskatchewan Behavioural Research Ethics Board on August 18, 2005. Should you have any questions regarding your rights as a participant in this study you may call the Office of Research Services at the University of Saskatchewan (306-966-2084). Out of town participants may call collect.

Sincerely,

Swathi Krishnaprasad, BScPharm
Graduate Student

Roy Dobson, BScPharm, MBA, PhD
Assistant Professor of Pharmacy

APPENDIX D

Reminder Postcard

Re: Pharmacists and their Perceptions towards Health Care Study

Dear Pharmacist Name:

You recently received a request to complete a questionnaire on Pharmacists Perceptions towards Health Care as a Commodity or a Public Good. If you have already completed and returned the survey, thank you. If you have not yet completed the questionnaire, we would ask that you complete the survey as soon as possible and to return it in the pre-stamped envelope provided. Your participation is important and we look forward to receiving a completed questionnaire from you.

As you know, the purpose of this study is to gain pharmacists perceptions on the health care system, as well as their support for the type of funding. In addition to informing members of the pharmacy profession about pharmacists' perception on these programs, the information obtained from you and other participants in the study will help to better inform those charged with planning and implementing changes in the delivery of the programs.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306-966-6377) or phone (306-966-6363).

Sincerely,

Swathi Krishnaprasad, BScPharm
Graduate Student
College of Pharmacy and Nutrition

APPENDIX E

Second Mailing Cover Letter

Date
Pharmacy Name
Pharmacist Name
Mailing Address
City/Town Postal Code

ID Number

Re: Pharmacists' Perception of Health Care as a Commodity or Public Good

Dear Pharmacist Name:

You recently received a request to complete a questionnaire on Pharmacists Perceptions towards Health Care as a Commodity or a Public Good. If you have already completed and returned the survey, thank you. If you have not yet completed the questionnaire, we would ask that you complete the survey as soon as possible. We have included an additional questionnaire and pre-stamped envelope in case you misplaced the original. Your participation is important and we look forward to receiving a completed questionnaire from you.

As you know, the purpose of this study is to gain information on pharmacists' perceptions of the health care system, as well as their support for various types of health care funding. In addition to informing members of the pharmacy profession about the perceptions of pharmacists, the information obtained from you and other participants in the study will help to better inform those charged with planning and implementing changes in the delivery of these programs.

Your participation is important. However, it is completely voluntary and you do not have to complete the questionnaire if you do not wish; you may also refuse to answer individual questions. You may withdraw from the study at any time and your data will be destroyed if you so choose. The code number on the questionnaire is designed to give the investigators the ability to track questionnaires while keeping your identity strictly confidential. Only the principal investigator (Roy Dobson) and co-investigator (Swathi Krishnaprasad) will have access to the data arising from this study. All information will be stored in secure facilities at the University of Saskatchewan. Results will be aggregated to ensure that the identities of individual respondents are safeguarded. Results will be reported in the student-researcher's Thesis, refereed periodicals and at conferences and meetings associated with pharmacists and health care organization.

Should you have any concerns about this research do not hesitate to contact the principal investigator (Roy Dobson) by e-mail (roy.dobson@usask.ca), facsimile (306-966-6377) or phone (306-966-6363). Completing and returning this survey constitutes consent for the researchers to use the data for the purposes of conducting the study as approved by the University of Saskatchewan Behavioural Research Ethics Board on August 18, 2005. Should you have any questions regarding your rights as a participant in this study you may call the Office of Research Services at the University of Saskatchewan (306-966-2084). Out of town participants may call collect.

Sincerely,

Swathi Krishnaprasad, BScPharm
Graduate Student

Roy Dobson, BScPharm, MBA, PhD
Assistant Professor of Pharmacy

APPENDIX F

Ethics Approval



**UNIVERSITY OF SASKATCHEWAN
Behavioural Research Ethics Board (Beh-REB)**

NAME: Roy Dobson, Pharmacy and Nutrition
Swathi Krishnaprasad

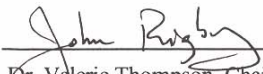
Beh 05-93

DATE: 18-Aug-2005

The Behavioural Research Ethics Board (Beh-REB) has reviewed the Application for Ethics Approval for your study "Pharmacists Perceptions of Health Care as a Commodity or Public Good" (Beh 05-93).

1. Your study has been APPROVED.
2. Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Committee consideration in advance of its implementation.
3. The term of this approval is for 5 years.
4. This approval is valid for one year. A status report form must be submitted annually to the Chair of the Committee in order to extend approval. This certificate will automatically be invalidated if a status report form is not received within one month of the anniversary date. Please refer to the website for further instructions
<http://www.usask.ca/research/behavrsc.shtml>

I wish you a successful and informative study.


602 Dr. Valerie Thompson, Chair
Behavioural Research Ethics Board (Beh-REB)

Office of Research Services, University of Saskatchewan
Room 1607, 110 Gymnasium Place, Box 5000 RPO University, Saskatoon SK S7N 4J8 CANADA
Telephone: (306) 966-8576 Facsimile: (306) 966-8597
<http://www.usask.ca/research>